# INSTALLATION RESTORATION PROGRAM

# Final **Remedial Investigation Report**

Volume II Appendix A-L

120th FighterWing Montana Air National Guard Great Falls International Airport Great Falls, Montana

May 1997



HAZARDOUS WASTE REMEDIAL ACTIONS PROGRAM
Environmental Restoration and Waste Management Programs
Oak Ridge, Tennessee 37831-7606
managed by LOCKHEED MARTIN ENERGY SYSTEMS, INC.
for the U.S. DEPARTMENT OF ENERGY under contract DE-AC05-840R21400

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#### REPORT DOCUMENTATION PAGE

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#### 13. ABSTRACT (Maximum 200 Words)

A Remedial Investigation was conducted at the Great Falls Air National Guard Base during April, May, and July 1996. During the period four IRP sites were investigated (IRP Sites 1, 6, 7, and 8). The investigation consisted of drilling 14 soil borings and installing 10 monitoring wells.

At Sites 1 and 6, no contaminants in the soil or groundwater were found above State and Federal cleanup levels; and a Decision Document to support no further action is recommended. At Sites 7 and 8, no contaminants were found in the soil above State and Federal cleanup levels; and a Decision Document to support no further action with respect to soil contamination is recommended. At Sites 7 and 8, groundwater contamination above State and Federal cleanup levels was detected. The contamination included petroleum hydrocarbons, chlorinated solvents, and dissolved metals. It is recommended that an Engineering Evaluation/Cost Analysis be prepared to evaluate remedial alternatives for the groundwater at Sites 7 and 8.

14. SUBJECT TERMS 15. NUMBER OF PAGES Remedial Investigation, Decision Document, Engineering Evaluation/Cost Vol 1-145/Vol 2-445 16. PRICE CODE Analysis 18. SECURITY CLASSIFICATION 20. LIMITATION OF 17. SECURITY CLASSIFICATION 19. SECURITY CLASSIFICATION OF REPORT OF THIS PAGE **ABSTRACT** Unclassified nclassified OF ABSTRACT Unclassified None

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### **APPENDICES**

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	FEDERAL DRINKING WATER STANDARDS AND MONTANA NUMERIC WATER OLD LITY STANDARDS	

# APPENDIX A FIELD CHANGE REQUEST FORMS

Date: 4/25/96
Field Change No.:
Project No.: 8056-10/ Montana Air Mational Gillard.
Applicable Document Remedia Investigation / Feasibility Study Work Plan April
Description:  Sample identification, Section 6.0 of OAPP. Applicable Sections are  6.1, 6.4, 6.1.2, 6.1.3, and 6.1.4. Pages B.6-1, B.6-2.
6.1, 6.4, 6.1.2, 6.1.3, and 6.1.4. Yages \$6-1, \$6-2.
Reason For Change: This Sampling System is complex and is not applicable for this field activity.
Recommended Disposition:  To use an easier numbering system for soil and groundwater Sources. Soil begins and depth, and groundwater Sources be identify by Site leading the Humbon and the round of Supling ereal. example:  6-5815-80-6.5  Impact on Present and Completed Work:  1/10/10 6-7/10/2-60/
NONE
·
Final Disposition: As Recommeded Dafue has.
Requested By: Field / Project Manager: Michael M. Chat Zadeh
Approvals: Project Manager: \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \

Date: 4/24/96
Field Change No.: 2
Project No.: 8056-10/ Mortana Air electional Great Paly, Montana
Applicable Document RI/FS Worldon Afril 1996, Sof # 4. Rield eg fra t
Description: Decontamition, Section 4.1.  We of ASTM-14fe I water rather than ASTM Type If for exposure
Reason For Change:  Doe to the fact that we receid ASTM Tyle I water in the field three days before
Fild ofertion and Astm Tyle IT was not available, it was agreed to de Tyle I. Astmunter for egipt Decor in the field, if we collect a suffer of
Recommended Disposition:  Agreed to the ASTM Type I Water for egipt Decon, if analy ling a  No ples by fixed -base lob.
Impact on Present and Completed Work:
Final Disposition:  Used Tyle I ASTM water for egift Decon Guring Na / Suppress Decon- All gurdantes purply was done by disposable  Dakes, Soit did not effect the Project field feely absective.
Requested By: Field / Project Manager: Mchoel M. Characal Ph.D Site Manger.
Approvals: falulat Sr. /tychoogedogist.  Project Manager: Will St. /tychoogedogist.

Date: 4/24/96
Field Change No.: 3
Project No.: 8050-10/ Mentana Air x/o tional Guand, Great Fell, Montana.
Applicable Document RT/B World Plan April 1996.
Description:  Charge of Soil bosing at Monitoring well location, Pages 6-13, 6-18 of Section  6 of work Plans.
Reason For Change: 6-5B-18- under electric line . 8-5B8 was moved, new undergrowd whility line. 19-18- under electric line . 8-5B8 was moved, new undergrowd whiley line. 1-MW3 was shilled across taxing to get downgarkent of existing 7-MW1 Mountaing well.  8-5B7 Moved, new undergrowd electricalline.
by and Enjoyeering Dept from Mortana Air Nation Buard Persona P.
Impact on Present and Completed Work: 7-MWS located No of Blog 23 to have on ufgalist wall.
-Norte.
Final Disposition: Location were approved by Sith Manager (opter) and
Harwaf Sc. Hydrogoologist Dr. All Hedberg.
Requested By: Field / Project Manager: Michael M. Charles dels PhD sik Manager
Approvals: Harway Sr Hydrogeologit- Or Bil Helbers; Project Manager: Will Late Fritz Lebu

Date: 5/3/96
Field Change No.:
Project No.: 3056-101 Montana Air National Guard, Grat Palls, Montana
Applicable Document RI/FS World Man 1 April 1996. Section 43.1, DAPP, Page
Description:  SRI Field GC Praying of Minds of Problem Can't get it to Work Profedy,  Communitate with SRI factory and powners, still Cauld not got the equipment to work work from RI [13], Afril, 1996.
Reason For Change:  Several Mcchanical and afecting it Problem with field Git. Afterfled for Several Days to offerate the field Git, But attent, were unsuccessful.
Recommended Disposition:  Discussion Between Montana Air x/ation Cound Project Manager (David Burn, ofterla) and Sr. Hydrogenlogist at Hazurer (On Bill Harberg) and Fritz Lebon (Hazurer) Project Manager), it was secreted to return fiel GC and
Impact on Present and Completed Work: Three grub gend water singles from 6-MW,
PINE 7-MUS and 1-MUS and Submit to laborated (fixed Box) and analyte they within 24 hour
Final Disposition:  B a Substitute on field GC.
Desper were Submitted to lab with groundwater grab suples collected
for 6-MWI, 7-MW3, and 1-MW2.
Requested By: Field / Project Manager: Mchul M. Grazinales - Sete Manger as requested
Approvals:  Project Manager: Sr. Hydrogeoleger Alfazules Dr. Bill Hed Burg.  Will Frozent Com

## **OPERATIONAL TECHNOLOGIES**

#### MODIFICATION TO WORK PLAN FOR FIELD WORK

ORIGINATOR/DATE: 4/25/96 Project 1/6. 8656-10/
ANG BASE/STATION: Montana Air National Guard, Great Falls Mestana
WORK PLAN TOPIC: Montoring Well Construction and Completion, Section 7.1.41 lage 7-3.
7.1.41 Jage 7-3.
SUGGESTED MODIFICATION FOR FIELD WORK: Since the actual grandwater  depth is Unformer and during the ST investigation they week 20 of  Deven, it was decided; Michael M. Chazimobh! Site Manager and  Bill Hedday (Hazislas) to increase the langua of Streen internal.
SUGGESTED MODIFICATION FOR FIELD WORK: Jene Mr. actual Grandwater
Latting land of the art of the med so of
Jeff 4 15 Mafrais as Outher the St invertion 114 will and
Deres, it Was delided Michael M. Chazimoch Sete Manager and
Zull (u. 14) Col Will it
Bill Hedderg (HaZISPAI) To increase the large of streen internal.
REASON FOR MODIFICATION: Use 20 of Screen interval rather than  10 of screen, as suggested in Unit Nan Page 7-3, Section  7.1.4.1 (Maniforing well Constructions and Completions).
1 f a la telli 1 to the Para 73 lastical
10 of screen as suggested in book plan lage 1-5, sellion
7.1.4.1 (Mentocin well Construction and Constitues).
Sr. Hydrogeologist (HAZUHAD) Approval:
So. Hydrogeologist (HAZUSAF) Affrora : Sete Manyer Afrova : Mi Graf M. Thorizadel M.D.
ANGRC PROJECT MANAGER APPROVAL:
Will Holles for Fritz Libou

# APPENDIX B BORING LOGS AND MONITORING WELL CONSTRUCTION LOGS

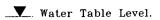
### KEY TO BORING LOG SYMBOLS

UNIFIED SOIL CLASSIFICATION SYSTEM - ASTM D2487								
	MAJOR DIV	ISIONS	SYMBOL/ GRAPHIC		DESCRIPTIONS			
	GRAVELS	Clean gravels with	GW		Well-Graded Gravels, Gravel - Sand Mixtures			
JLS Sieve)	GRAVELS	little or no fines	GP		Poorly Graded Gravels, Gravels - Sand Mixtures			
SD SOILS #200 Siev	(More than 50% of coarse fraction is	Gravels with over	GM		Silty Gravels, Poorly Graded Gravel- Sand-Clay Mixtures			
INED	larger than the #4 sieve size.)	12% fines	GC		Clayey Gravels, Poorly Graded Gravel— Sand—Clay Mixtures			
ARSE-GRAINED Smaller Than #	SANDS	Clean sands with	sw		Well-Graded Sands, Gravelly Sands			
	SANDS	little or no fines	SP		Poorly Graded Sands, Gravelly Sands			
%09<)	(More than 50% of coarse fraction is	Sands with over	SM		Silty Sands, Poorly Graded Sand-Silt Mixtures			
	smaller than the #4 sieve size.)	12% fines	SC		Clayey Sands, Poorly Graded Sand- Clay Mixtures			
Sieve)	GTV MG A1	TD GLAVIC	ML		Inorganic Silts and Very Fine Sands, Silty or Clayey Fine Sands			
SOILS #200 Si	SILTS AN	t less than 50)	CL		Inorganic Clays of Low to Medium Plasticity: Gravelly, Sandy or Silty Clays; Lean Clays			
T	(	,	OL		Organic Clays and Organic Silty Clays of Low Plasticity			
NE-GRAINED Smaller Than	CHTC AN	ID CLAYS	мн		Inorganic Silts, Micaceous or Diatomacious Fine Sandy or Silty Soils, Elastic Silts			
		greater than 50)	СН		Inorganic Clays of High Plasticity Fat Clays			
FII (>50%					Organic Clays of Medium to High Plasticity, Organic Silts			
	HIGHLY ORG	ANIC SOILS	Pt		Peat and Other Highly Organic Soils			



Sample retained for on-site screening.

Sample prepared for laboratory analysis.



PID Photo-Ionization Detector readings (ppm).

ND Parameter Not Detected

NA Measurement Not Applicable, Groundwater Not Detected

- No Measurement Performed

NR No Sample Recovery

Asphaltic Concrete
Portland Cement Concrete
Cement Grout
Boulders or Bedrock

draft final FIGURE A.1

KEY TO BORING LOG SYMBOLS

120th FG, Montana Air National Guard
Great Falls, Montana



SEPTEMBER 1995

FORMS\KEYLOG2

## OPTECH

# OPERATIONAL TECHNOLOGIES C O R P O R A T I O N

#### **LOG OF BORING 1-MW2**

Project No.:

8056-101

M. Ghazizadeh

Logged By: **Drilling Co.:** 

O'Keefe Drilling

Driller: **Date Drilled:**  Mike Downey 05/01/96

Sampling Method:

Rock cuttings from Air Rotary Depth Drilled: 70.0 FT.

Depth To Water:

**Date Measured:** 

**Surface Elevation:** 

3550.91 FT.

	Drilling Method: Air Rotary-Hammer			v-Hammer	TOC Elevation:		0.91 FT. 2.69 FT.			
					<i>y</i>		T	FIELD SCREENING		
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF MATERIALS		PID (ppm)		Monitoring Well	
					Surface soil, light brown, poor sample.	or quality	0			
5 —					Sandstone, silty, light brown, moist, no hydrocarbon odor, yellowish brown sand, slightl	at 7 ft. become	0			
10 <del>-</del> -		1.1.1			Sandstone, fine to medium-gr moist, no hydrocarbon odor.	rained, slightly	0			
15 —		į			Sand, change to silty-clayey v YR 6/6), slightly moist, no h	very fine, (10 ydrocarbon	0			
					odor. Sandstone, poor quality samp little water to cleanup hamme to medium-grained brown sar silty.	r and hole, fine	0			
20 -					Sandstone, light brown, silty, fine-grained slightly moist, no odor.	very hydrocarbon	0			
25 —	_				Same as above.		0			
30 —	_				Sandstone, silty, light brown, no hydrocarbon odor.	slightly moist,	0			
35 —					Sandstone, silty, reddish brow fine-grained, sorted.	vn, very	0			

## OPTECH OPERATIONAL TECHNOLOGIES

## CORPORATION

### **LOG OF BORING 1-MW2**

Project No.:

8056-101

Logged By:

M. Ghazizadeh

**Drilling Co.:** 

O'Keefe Drilling

Driller:

Mike Downey

05/01/96

Sampling Method:

**Rock cuttings from Air Rotary** 70.0 FT.

Depth Drilled: Depth To Water:

Date Measured:

3550.91 FT. Surface Elevation:

Date Drilled: 05/01/96			v Uammer	Surface Elevation:	n: 3550.91 FT. 3652.69 FT.	
Drilling Metho		TL KOISL	y-Hammer	100 Literation.	FIELD SCREENING	50
Depth (ft.) Blows/6"	% Kecovery Samples	Graphic	DESCRIPTION OF M	ATERIALS	PID (ppm)	Monitoring Well
45 —			Same as above, reddish brow	/n.	0	
50 —			Sand, trace of moisture, abo krilled dust, reddish brown s fine-grained sand, no odor.	ut 51 ft., slightly ilty, very fine-to	0	
55 —			Sand, dark gray, very fine-to sand, (10 YR 5/1), slightly r hydrocarbon odor.	o fine-grained noist, no	0	
60 —			Sand, light gray, very fine-to sand, dry, no hydrocarbon o brownish gray, very fine-gra	dor, at 58-59 ft.,	0	
65 —			Sandstone, become dark gra sandstone, (10 YR 5/1), dry odor.	y, very fine , no hydrocarbon	0	
75 —			Total Depth: 70.	0 FT.		-

## OPTECH

OPERATIONAL TECHNOLOGIES CORPORATION

#### LOG OF BORING 6-SB15

Project No.:

8056-101

Kathryn Pritchett

Logged By: Drilling Co.:

O'Keefe Drilling

Driller:
Date Drilled:

Clint Nelson 04/26/96

Sampling Method:

3" Stainless-Steel Split Spoon

Depth Drilled:

8.1 FT.

Depth To Water:

**Not Encountered** 

Date Measured:

NA

**Surface Elevation:** 

3676.16 FT.

	Drilled ing Me			4/26/96 [ollow=St	em Auger	Surface Elevation: 3676.16 FT.				
					·		FI	ELD SO	CREENI	NG
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF MATERIALS					
		95			Asphalt.  Sand, some gravel (up to cobfine-to very coarse-grained samoist, loose, yellowish brown	and, poorly sorted,	(ppm) 394			
	19 45 90	80			Weathered Sandstone, very f sand, little silt, firm, crumble brownish yellow (10 YR 6/6)	with moderate pressure,	9.4			
5 <b>-</b>	65 50/0.2'	30	X		Geotech Sample. Same as ab	oove.	1.2			
	100/0.4'				Same as above.  Total Depth: 8.	1 FT. BLS.	536			
10 -	-						11111		4.9	
_										
15 -	<b>-</b>									

# OPERATIONAL TECHNOLOGIES

OPERATIONAL TECHNOLOGIES C O R P O R A T I O N

### LOG OF BORING 6-SB16

Project No.:

8056-101

Logged By:

Kathryn Pritchett

**Drilling Co.:** 

O'Keefe Drilling

Driller:

Clint Nelson

Date Drilled:
Drilling Method

04/30/96

Sampling Method:

3" Stainless-Steel Split Spoon

Depth Drilled:

9.5 FT.

Depth To Water:

**Not Encountered** 

Date Measured:

NA

**Surface Elevation:** 

3676.69 FT.

Drilling Method: Hollow-Stem Auger							
<u>.</u>	iry.	s c			FIEL	D SCREENIN	IG
Depth (ft. Blows/6"	000	Samples	DESCRIPTION O	F MATERIALS	PID		
Depth (ft.) Blows/6"	% Recovery	Sar			(ppm)		
		000	Concrete.				
	90	0,0	Sand, little to some silt, trace cobble size), moist, yellowish	clay, some gravel (up to 1 brown (10 YR 5/4).	11.1		
			Weethered Sandstone little t	o some silt very fine-to	25.5		ļ
5 —	25		Weathered Sandstone, little to coarse-grained sand, yellowing dry.	sh brown (10 YR 5/6),			
_							
_	50		Same as above, strong odor.		790		
10			Total Depth: 9	.5 FT. BLS.			
_							
15 —							
_		To color of the co					

# OPTECH

# OPERATIONAL TECHNOLOGIES CORPORATION

#### LOG OF BORING 6-SB17

Project No.:

8056-101

Kathryn Pritchett

Logged By: **Drilling Co.:** 

O'Keefe Drilling

Driller:

**Clint Nelson** 

Sampling Method:

3" Stainless-Steel Split Spoon

Depth Drilled: 9.9 FT.

Depth To Water:

**Not Encountered** 

Date Measured:

NA

Dimei.			mit Neis							
Date Drille	:d:	04	1/26/96		3676.54 FT.	676.54 FT.				
Drilling M	ethod:	H	ollow-St	tem Auger						
Depth (ft.) Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION O	FIELD	SCREENING				
Dep	% R	Sa	Ę.			(ppm)				
	90			Asphalt.  Sand, some silt, little gravel loose, very fine-to coarse-grapoorly sorted, yellowish brown	nined sand, moderate to	478				
- 8 11 -	100	X		Geotech Sample.		30				
5 100/0.3	50	ŀ		Weathered Sandstone, well sodor, very fine-to coarse-gramoderate pressure, moist.	orted, light grey color, ined sand, firm, crumble	е 53				
100/0.3* 	100			Geotech Sample.  Sand, some silt, very fine-to well sorted, loose, moist, hyd	medium grained sand, drocarbon odor.	178				
10 - 100/0.4	65			Same as above.  Total Depth: 9	.9 FT. BLS.	660				
15 —										

## OPTECH OPERATIONAL TECHNOLOGIES

CORPORATION

#### **LOG OF BORING 6-SB18**

Project No.:

8056-101

Logged By:

Kathryn Pritchett

**Drilling Co.:** 

O'Keefe Drilling

Driller: Date Drilled: **Clint Nelson** 

04/26/96

Sampling Method:

3" Stainless-Steel Split Spoon

Depth Drilled:

8.3 FT.

Depth To Water:

**Not Encountered** 

**Date Measured:** 

NA

**Surface Elevation:** 

3676.42 FT.

Drilling Method: Hollow-Stem Auger									
t.)	Ę.	ery	Š	ပ		FIELD SCREEN		EENING	G ——
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF MATERIALS	PID			
Dep	Blo	% R	Sa	Ğı		(ppm)			
	_				Asphalt.	1.2			
_		100			Sand, little silt, little to some gravel (up to pebble size), dry to slightly moist, loose, very coarse-grained sand.	1.2			
	23	100	V		Geotech Sample.	0			
_	26				Bedrock encountered.				
5 —	52 100/0.2'	25	X		No sample collected-except GC (field). Weathered sandstone, little silt, very fine-to coarse-grained sand, firm, crumbles with medium pressure, moderate to well-sorted sandstone, yellowish	1.4			:
	68 100/3'	35			brown, (10 YR 5/6). Same as above.	55			:
	100/0.3'	60			Sand, some silt, trace clay, very fine-to coarse-grained sand, loose, dry, yellowish brown (10 YR 5/6).  Total Depth: 8.3 FT. BLS.	100			
10 —									
_									
_									-
15 —	_								
_									

## OPTECH

OPERATIONAL TECHNOLOGIES CORPORATION

#### **LOG OF BORING 6-DW1**

Project No.: Logged By:

**Drilling Co.:** 

8056-101

Kathryn Pritchett

O'Keefe Drilling

Driller:

Clint Nelson

Sampling Method:

3" Stainless-Steel Split Spoon

Depth Drilled: 7.6 FT.

Depth To Water:

**Not Encountered** 

Date Measured:

NA

Surface Elevation: 3676

3676.35 FT.

Date Drilled:	ed: 04/27/96 Surface Elevation: 3676.35 FT.  fethod: Hollow-Stem Auger							
			1		·	FIELD S	CREENIN	īG
Depth (ft.) Blows/6" % Recovery	Samples	Graphic	DESCRIPTION OF MATERIALS			PID		
De B	S	9			(р	pm)		
		Asphalt	•					
-								
4								
		Cond li	ttle eilt twees sleet l					
5 — 100 100	, , .	(granule	e to pebble size), ver	little to some gravel ry fine-to coarse-grain YR 4/1), strong odor,	ed 3	346	-	
		loose, fi	ill with pea gravel.	YR 4/1), strong odor,				
		· · · · · · · · · · · · · · · · · · ·						
100/0.3' 35		Same as			6	633		
			Total Depth:	7.6 FT. BLS.				
10 —								
_								
_								
15 —								
								į
$\dashv$								

# OPTECH

**OPERATIONAL TECHNOLOGIES** CORPORATION

#### **LOG OF BORING 7-DW1**

Project No.:

8056-101

Logged By:

Kathryn Pritchett

**Drilling Co.:** 

O'Keefe Drilling

Driller:

**Clint Nelson** 

Date Drilled: Drilling Method: Hellow-Stem Auger

04/27/96

Sampling Method:

3" Stainless-Steel Split Spoon

Depth Drilled:

4.2 FT.

Depth To Water:

**Not Encountered** 

Date Measured:

NA

**Surface Elevation:** 

3676.10 FT.

Drilli	Drilling Method: Hollow-Stem Auger								
t.)	F.4	ery	Si	ပ္		FI	FIELD SCREENING		
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF MATERIALS				
Del	B	% H	Š	_ <u></u>		(ppm)			
					Asphalt.				
		80			Sand, some silt, trace to little clay, very fine-to medium-grained sand, brown (10 YR 4/3), moist, firm, hard.	42			
5 —	100	100			Sand, some silt, little gravel (pebble size), very fine-to coarse-grained sand, moderate to poorly sorted, greyish brown (10 YR 5/2), firm, hard, clay at bottom of spoon, some silt, light grey (10 YR 7/1), hard, very dense.  Total Depth: 4.2 FT. BLS.	37			
10	_								
15 <del>-</del>									

# PTEC

OPERATIONAL TECHNOLOGIES CORPORATION

#### **LOG OF BORING 7-SB5**

Project No.:

8056-101

Kathryn Pritchett

Logged By: **Drilling Co.:** 

O'Keefe Drilling

Driller: Date Drilled: **Clint Nelson** 

04/27/96

Sampling Method:

3" Stainless-Steel Split Spoon

Depth Drilled:

8.6 FT.

Depth To Water:

**Not Encountered** 

**Date Measured:** 

NA

**Surface Elevation:** 

3675.74 FT.

Drill	Drilling Method: Hollow-Stem Auger								
ř.)	9.11	ery	S	ပ			FIEL	D SCREI	ENING
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF MATERIALS  Asphalt		PID (ppm)		
					Asphalt.				
-	16 13 12 18	65			Silt, little to some clay, trace firm, moist, light grey (10 Y structure sand.	e gravel (cobble), stiff, (R 7/1), small prismatic	153		
5 <b>–</b>	60 100/0.4'	65			Sand, some silt, very fine-to hard, very dense, dry, brown	medium-grained sand, nish yellow (10 YR 6/6).	19		
10 —	61 102/0.1	95			Silt, trace sand (very fine-grasandstone gravel (cobble size sand, moderately sorted, clay greyish brown (10 YR 5/2), dense.  Total Depth 8	ained), hard, very dense, e), fine-to coarse-grained y at bottom of split spoon, very plastic, hard, very	761		

# O P T E C H OPERATIONAL TECHNOLOGIES C O R P O R A T I O N

#### **LOG OF BORING 7-SB6**

Project No.:

8056-101

Logged By:

Kathryn Pritchett

**Drilling Co.:** 

O'Keefe Drilling

Driller: Date Drilled: **Clint Nelson** 

04/27/96

Sampling Method:

3" Stainless-Steel Split Spoon

Depth Drilled:

8.0 FT.

Depth To Water:

**Not Encountered** 

Date Measured:

NA

**Surface Elevation:** 

3676.50 FT.

Drill	ing Me	thod:	Hollow-	Stem Auger				
t.)	1.5	ery	တ္က ၁		FI	FIELD SCREENING		
Depth (ft.)	Blows/6"	% Recovery	Samples Graphic	DESCRIPTION OF MATERIALS	PID (ppm)			
5 —	22 39 37 — 59	<b>X</b> % 75	rg Sal	Sand and silt, trace clay, trace gravel (granule to pebble), dark brown (10 YR 3/3), moist, soft, loose, very fine-to coarse-grained sand.  Sand and silt, little clay, very fine-to medium-grained sand, yellowish brown (10 YR 5/4), trace gravel (granule), hard, dense, moist.  Sand (weathered sandstone), little silt, very fine-to medium-grained sand, hard, very dense, crumbles with moderate pressure, slightly moist, hydrocarbon odor.  Total Depth: 8.0 FT. BLS.	1.5			
15 —								

# OPTECH

# OPERATIONAL TECHNOLOGIES CORPORATION

#### **LOG OF BORING 7-SB7**

Project No.:

8056-101

Kathryn Pritchett

Logged By: **Drilling Co.:** 

O'Keefe Drilling

Driller: Date Drilled: **Clint Nelson** 

04/27/96

Sampling Method:

3" Stainless-Steel Split Spoon

Depth Drilled: 8.3 FT.

Depth To Water:

**Not Encountered** 

**Date Measured:** 

NA

**Surface Elevation:** 

3675.97 FT.

	Drille			4/27/96 [-1] 64		Aevation: 30/5.9/ F1.				
Drill	ing Me	thod:	Н	lollow-Si	em Auger		FIELD SCREENING			
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF MATER	RIALS	PID (ppm)	ELD SC	REENI	NG
					Asphalt.					
		100			Silt, some sand, loose, soft, very fine-to- coarse-grained sand, brownish yellow ( clay at bottom of split spoon, light grey stiff, firm.	10 YR 6/6),	33			
5 <b>—</b> —	36 24 59 <del>1</del> 00/.3	100			Weathered sandstone, little to some gravery fine-to medium-grained sand, hard dense, slightly moist, brownish yellow hydrocarbon odor.	l. dense to verv	458			
_	100/0.1	25	$\sim$		Same as above, hydrocarbon odor.		218			
	100/0.1	<b>2</b> 5			Total Depth: 8.3 FT. BL	<u>S</u> .	210			
10 -										
_										
15										
- -							-			

## OPTECH OPERATIONAL TECHNOLOGIES CORPORATION

### LOG OF BORING 8-SB6

Project No.:

8056-101

Logged By:

Kathryn Pritchett

**Drilling Co.:** 

O'Keefe Drilling

Driller:

**Clint Nelson** 

Date Drilled:

04/25/96

Sampling Method:

3" Stainless-Steel Split Spoon

Depth Drilled:

10.3 FT.

Depth To Water:

**Not Encountered** 

Date Measured:

NA

**Surface Elevation:** 

3675.99 FT.

Drilling Method: Hollow-Stem Auger									
ñ.)	9	ery	es	ic		FII	ELD SC	REENIN	iG
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF MATERIALS	PID (ppm)			
					Asphalt.	17.5			
_	18 25 100/0.4	80			Sand, some silt, trace clay, very fine-to very coarse-grained sand, light grey brown, soft, crumble with pressure, dry to moist, weathered sandstone at end.	17.3			
_	22 31	50	X		Geotech Sample. Very weathered sandstone.	-			
5 –	25 50 50/0.2'	80			Sand, weathered sandstone, very fine-to coarse-grained sand, silt, light yellowish brown to reddish brown, moist, soft, loose, well-sorted.	1.0			,
- -	46 56 50/0.2'	50			Geotech Sample.	-			
10 <b>-</b>	75 100/0.3'	60			Sand, little silt, very fine-to coarse-grained sand, dry, loose, light to medium yellowish brown.  Total Depth: 10.3 FT. BLS.	3.3			
15 <b>-</b> -									

# OPTECH

OPERATIONAL TECHNOLOGIES CORPORATION

#### **LOG OF BORING 8-SB7**

Project No.:

8056-101

Kathryn Pritchett

Logged By: **Drilling Co.:** 

O'Keefe Drilling

Driller: Date Drilled: **Clint Nelson** 

04/25/96

Sampling Method:

3" Stainless-Steel Split Spoon

Depth Drilled:

10.3 FT.

Depth To Water:

**Not Encountered** 

**Date Measured:** 

NA

Surface Flevation:

3675 70 FT

Date Drille Drilling Me			4/25/96	Su tem Auger	Surface Elevation: 3675.79 FT.			
				em Augei		FIELD SCREENING		
Depth (ft.) Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF M	IATERIALS	PID (ppm)		
	80			Asphalt.  Sand, little to some silt, trace clay to dry, loose, very fine-to coarsemedium yellowish brown.	y, little gravel, moist grained sand,	174		
- 45 61 	50	X		Geotech Sample.		3.3		
5 21 60 51/0.3'	50			Sand, little silt, trace gravels (pet fine-to coarse-grained sand, medi loose, dry.	um yellowish brown,	20.6		
39 100/0.4'	45	$\times$		Geotech Sample. Strong odor, sa		506		
10 —	60	X		Sand (weathered sandstone), very coarse-grained sand, well-sorted, brown with light grey mottles, hat pressure, hydrocarbon odor, mois Total Depth: 10.3 F	light yellowish rd, loose with st. /	304		
_								
15 —								
	7.7							

# OPTECH

OPERATIONAL TECHNOLOGIES CORPORATION

#### **LOG OF BORING 8-SB8**

Project No.:

8056-101

Logged By:

Kathryn Pritchett

**Drilling Co.:** 

O'Keefe Drilling

Driller:

**Clint Nelson** 

Date Drilled: Drilling Method: Hollow-Stem Auger

04/25/96

Sampling Method:

3" Stainless-Steel Split Spoon

Depth Drilled:

10.5 FT.

Depth To Water:

**Not Encountered** 

Date Measured:

NA

**Surface Elevation:** 

3675.95 FT.

Drilli	Drilling Method: Hollow-Stem Auger								
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF MATERIALS	FII PID (ppm)	ELD SCI	REENIN	I <b>G</b>
	4 5 6	90			Asphalt.  Sand, some silt, little clay, very fine-to coarse-grained sand, trace gravel (pebbles), soft, moist, medium yellowish brown.	20.7			
5 —	30 80 50/0.1'	100			Sand, very fine-to coarse-grained sand, trace silt, weathered sandstone, dry to moist, hard, light yellowish brown.	94			
10 -	34 	100			Weathered sandstone, very fine-to medium-grained sand, trace gravel (pebble size), dry, light yellowish brown, well-sorted.  Total Depth: 10.5 FT. BLS.  Note: Spoon refusal at 5.5 FT. auger (bit) to 9.5 FT. and broke up sandstone to drive spoon 9.5 FT. to 10.5 FT. PID reading inside of borehole 800 to 900 ppm range, hydrocarbon odor apparent.	47			
15 <del>-</del> - -									

# OPTECH

#### OPERATIONAL TECHNOLOGIES C O R P O R A T I O N

#### **LOG OF BORING 8-SB9**

Project No.: Logged By:

8056-101

Kathryn Pritchett

**Drilling Co.:** 

O'Keefe Drilling

Driller:

Clint Nelson

04/30/96

Sampling Method:

3" Stainless-Steel Split Spoon

Depth Drilled:

9.4 FT.

Depth To Water:

**Not Encountered** 

Date Measured:

NA

**Surface Elevation:** 

3675.93 FT.

	Drilled			4/30/96	<u> </u>	Surface Elevation: 3675.93 FT.				
_	ing Me				em Auger		FIE	LD SCR	EENING	
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF	MATERIALS	PID (ppm)			
		100			Asphalt.  Sand, some silt, some gravel, of 3/3), very fine-to coarse-graine to pebble size gravel.	dark brown (10 YR ed sand, moist, granule	0			
5 —	40 100	100			Weathered sandstone, yellowist slight moist, very fine-to coarse well-sorted.	h brown (10 YR 5/4), e-grained sand,	113			
10 —	100/0.4'	90			Same as above, yellowish brow Total Depth: 9.4		11.1			
15	_									
_										

# OPERATIONAL TECHNOLOGIES CORPORATION

### LOG OF BORING 8-SB10

Project No.:

8056-101

Logged By:

Kathryn Pritchett

Drilling Co.:

O'Keefe Drilling

Driller:

**Clint Nelson** 

Date Drilled:

04/30/96

Sampling Method:

3" Stainless-Steel Split Spoon

Depth Drilled:

9.9 FT.

Depth To Water:

**Not Encountered** 

Date Measured:

NA

**Surface Elevation:** 

3675.00 FT.

Drill	Drilling Method: Hollow-Stem Auger								
						FII	ELD SCI	REENIN	G
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF MATERIALS	PID (ppm)			
					Asphalt.				
		75			Sand, some silt, some gravel (up to pebble size), very fine-to coarse-grained sand, moist, brown to dark brown (10 YR 4/3), gravels.	0			
5 <b>-</b>	1 2 3 2	100			Sand, little silt, little gravel, yellowish brown (10 YR 5/4), granule to pebble size gravel, wet, soft.	58			
	74 100/0.4'	80	X		Sandstone, brownish yellow (10 YR 6/6), dry, some silt, very fine-to medium-grained sand.	92			
10 -					Total Depth: 9.9 FT. BLS.				
 15 <b>-</b> -									

## O P T E C H

#### OPERATIONAL TECHNOLOGIES C O R P O R A T I O N

#### **LOG OF BORING 6-MW2**

Project No.: 8056-101 Sampling Method: **Rock cuttings from Air Rotary** Logged By: Kathryn Pritchett Depth Drilled: 62.2 FT. Depth To Water: **Drilling Co.:** O'Keefe Drilling 44.0 FT. Driller: Mike Downey **Date Measured:** 04/30/96 Date Drilled: 04/24/96 **Surface Elevation:** 3676.16 FT.

Drill	ing Mo	ethod:	A	ir Rotar	y-Hammer	TOC Elevation: 3675.86 FT.			
								FIELD SCREENING	
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF MATERIALS		PID (ppm)		Monitoring Well
					Asphalt.				
					Silt, some sand.				
5 —	_				Weathered Sandstone, some smedium-grained, sandstone, (10 YR 6/6).				
10 -					Sandstone/Siltstone, very fine pale brown to pink (10 YR 7/7/4), dry.	4 to 7.5 YR			
10 -					Weathered Sandstone, brown YR 6/6), little to some silt, di	ish yellow (10 y.	0		
15 <del>-</del> - - -					Weathered Sandstone/Siltston brown-pink, (10 YR 7/4 to 7. very fine-to medium-grained	5  YR  7/4),	0		
20 -	_				Sandstone, fine-to medium-gr brown, sorted, no hydrocarbo moist.	ained, light n odor, slightly	0		
25 —	-				Sandstone, fine-grained, light 6/4), sorted, no hydrocarbon moist.	brown (10 YR odor, slightly			
30 -					Sandstone, fine-grained sands brown, moist at 34 FT.	tone, reddish			
35 —					Sandstone, reddish brown (10 moist, yellowish brown sandst fine-grained, moist, no hydrod	one.			

# OPTECH

OPERATIONAL TECHNOLOGIES CORPORATION

### LOG OF BORING 6-MW2

Project No.:

8056-101

Logged By:

Kathryn Pritchett

**Drilling Co.:** 

O'Keefe Drilling

Driller: Date Drilled: Mike Downey

04/24/96

Sampling Method:

**Rock cuttings from Air Rotary** 

Depth Drilled:

62.2 FT.

Depth To Water:

44.0 FT.

Date Measured:

04/30/96

**Surface Elevation:** 

3676.16 FT.

2675 86 FT

Drilling Method	: A	ir Rotar	y-Hammer	TOC Elevation:	3675.86 FT.		
			DESCRIPTION OF MATERIALS		FIE	LD SCREENING	g u
Depth (ft.) Blows/6" % Recovery	Samples	Graphic			PID (ppm)		Monitoring
45 — 50 — 55 — 60 — 70 — 75 — 75 — 75 — 75 — 75 — 75 — 7			Sand, interbedded yellowish reddish brown fine-grained shydrocarbon odor, moisture-at 44 FT.  Sandstone, reddish brown, smoist.  Same as above.  Sandstone, very fine-to fine-hydrocarbon odor, dark gray Sandstone, dark grey (10 Yf fine-to fine-grained, no odor Total Depth: 62.2 F	grained, no /, (10 YR 4/1).  R 4/1), very /, not moist.			

# OPTECH OPERATIONAL TECHNOLOGIES C O R P O R A T I O N

#### **LOG OF BORING 6-MW3**

Project No.:

8056-101

Kathryn Pritchett

Logged By: **Drilling Co.:** 

O'Keefe Drilling

Driller: Date Drilled: Mike Downey

04/29/96

Sampling Method:

**Rock cuttings from Air Rotary** 

Depth Drilled: 65.0 FT.

Depth To Water:

43.0 FT. BLS

Date Measured:

04/30/96

Surface Elevation:

3676 60 FT

li .	Date Drilled: 04/29/96 Surface Elevation: 3676.60 FT.		76.60 FT.						
Drilling Met	thod:	Αi	r Rotar	y-Hammer	TOC Elevation:	tion: 3676.32 FT.			
ff.)	very	es	ic			FI	ELD SCREENING	ii	
Depth (ft.) Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF MATERIALS		PID		Monitoring Well	
ğ B	%	S	O			(ppm)		Mc	
				Silt, some sand, dark yellowi YR 4/4), moist.	sh brown (10	0			
5 —				Weathered Sandstone, some s brown (10 YR 5/4), fine-grain very fine-to medium-grained	ned sandstone, sand,	0.5			
				well-sorted to moderately sor Sandstone/Siltstone, pink (7.5 Sandstone, yellowish brown (	5 YR 7/4).	107 69			
10 —				some silt, fine-grained sand to medium-grained sand, dry.	o some				
15 —			× × × ×	Siltatona interhedded shelev	siltatana	202			
		2	* * * * * * * * * *	Siltstone, interbedded shaley s Sandstone, very fine-to fine-g		282			
20				silt, very pale brown (10 YR well-sorted.	7/4),	0			
				Sandstone, light brown, fine-severy little silt.	gramed, sorted,				
25 —		× × × × × × × × × × × × × × × × × × ×	<pre></pre>	Siltstone, fine grained, light b 6/4), sandstone, silty with lay medium-grained sandstone, light medium-grained sandstone from 30.0 ft.	ers of `ght brown,				
30 —			× × × ×	Sand, fine-to very fine-grained bedded, no hydrocarbon odor	d, thinly				
35 —				Silty Sandstone, fine-grained, (10 YR 6/4), thinly bedded, nodor.					
		:				,			

# OPTECH

OPERATIONAL TECHNOLOGIES C O R P O R A T I O N

#### **LOG OF BORING 6-MW3**

Project No.:

8056-101

Logged By:

Kathryn Pritchett

**Drilling Co.:** 

O'Keefe Drilling

Driller:
Date Drilled:

Mike Downey

Drilling Method:

04/29/96

Ain Dotomy-1

Sampling Method:

Rock cuttings from Air Rotary

Depth Drilled:

65.0 FT.

Depth To Water:

43.0 FT. BLS

Date Measured:

04/30/96

**Surface Elevation:** 

3676.60 FT.

**TOC Elevation:** 

3676.32 FT.

Drill	ing Me	thod:	A	ir Rotar	y-Hammer	TOC Elevation:	3676.32 FT.		
-	_	Ę.					FII	ELD SCREENING	gu
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF M	DESCRIPTION OF MATERIALS			Monitoring Well
45 —					Sandstone, fine-grained, slig at 43.0 FT., red color (10 Y).  Sandstone, fine-grained, slig laminated, no hydrocarbon o moist, red color.	R 7/4).  htly silty, thinly			
50 <del>-</del> -	_				Sandstone, fine, slightly silty change color to yellowish bro 54.0 ft. had 2 inches dark gr coarse-grained sandstone.	own, moist, at			
55 —					Sandstone, top 1 FT. light gr very fine-to fine-grained, 57 sandstone, thinly bedded, no odor.	0 FT. dark grey hydrocarbon			
65 —					Sandstone, fine-grained, dark 4/1), no hydrocarbon odor.  Total Depth: 65.0 F				
70 —	_				•				
75 — — — — —									-

## OPTECH

### OPERATIONAL TECHNOLOGIES CORPORATION

#### LOG OF BORING 7-MW2

Project No.: Logged By:

8056-101

M. Ghazizadeh

**Drilling Co.:** 

Driller:

O'Keefe Drilling Mike Downey

Date Drilled:

04/28/96

Sampling Method:

Rock cuttings from Air Rotary

Depth Drilled:

70.8 FT.

Depth To Water:

45.0 FT.

Date Measured:

05/01/96

Surface Elevation:

3676 53 FT

Date Drilled: 04/28/96						Surface Elevation			
Drilling Method: Hollow-Stem Auger (Surface Dri				tollow-Si	tem Auger (Surface Drilling)	TOC Elevation:	3676.21		
ן בּ	#. <b>6</b>	ery	S.	ာ			FIELD SCREENING		80
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF MATERIALS		PID (ppm)		Monitoring Well
					Asphalt.		0		
					Silt, little to some clay, trace pebble size), greyish brown (moist.	10 YR 5/2),			
5 –	_				Top with weathered Bedrock		0		
_					sandstone, some silt, brownis YR 6/6), dry, no odor, very	n yellow (10	2 0		
					medium-grained sand.		0		
					Sandstone/Siltstone, very fine	e-grained, dry,	0		
10	_				pink (10 YR 7/4), no odor.		6.9		
					Sandstone, fine-grained sand, yellowish brown (10 YR 5/4)	some silt,	27		
_								!	
15							30		
15	_		'	× × × × ×	Siltstone, thinly bedded.				
				X			8		
=				× × × × × × × × × × × × × × × × ×	Siltstone, with interbedded sh pull augers at 20 FT.	ale, wet silt as			
20 —	-			× × × ×	Sandstone, fine-grained, some YR 7/4) to brownish yellow (	e silt, pink (7.5 10 YR 6/6).	0		
_			ļ						
25 —	-				Sandstone/Siltstone, very fine well sorted, dry, very pale br 7/4).		·		
30	<del></del>	į			Same as above.				
35	-		ļ		Same as above.				
_					•				

# OPTECH

OPERATIONAL TECHNOLOGIES CORPORATION

#### **LOG OF BORING 7-MW2**

Project No.:

8056-101

Logged By:

M. Ghazizadeh

**Drilling Co.:** 

O'Keefe Drilling

Driller:

Mike Downey

**Date Drilled:** 

04/28/96

Sampling Method:

**Rock cuttings from Air Rotary** 

Depth Drilled:

70.8 FT.

Depth To Water:

45.0 FT.

**Date Measured:** 

05/01/96

**Surface Elevation:** 

3676.53 FT.

Drilling Meth	hod:	Hollow-St	em Auger (Surface Drilling)	TOC Elevation	: 3676.21	FT.	
					FIELD	SCREENING	90 E
Depth (ft.) Blows/6"	% Recovery	Graphic	DESCRIPTION OF MATERIALS		PID (ppm)		Monitoring Well
45 — 50 — 55 — 60 — 70 — 75 —			Same as above.  Sandstone, very fine-to medical sand, some silt, yellowish brown of 6/6), well sorted, slight mois hydrocarbon odor.  Same as above.  Same as above, yellowish brown of 5/4).  Sandstone, grey (10 YR 5/1) some silt, very fine-grained silt, very fine-grained silt.  Same as above, slightly mois for a same as above, slightly mois for a same as above.	own (10 YR t, slight  own (10 YR , well sorted, sand, dry.			

# OPTECH

# OPERATIONAL TECHNOLOGIES C O R P O R A T I O N

#### **LOG OF BORING 7-MW3**

Project No.:

8056-101

M. Ghazizadeh

Logged By: **Drilling Co.:** 

O'Keefe Drilling

Driller: Date Drilled: Mike Downey

05/01/96

Sampling Method: Depth Drilled:

**Rock cuttings from Air Rotary** 

70.0 FT.

Depth To Water:

**Date Measured:** 

**Surface Elevation:** 

3667.31 FT.

	ing Me			ir Rotar	y-Hammer	TOC Elevation:		
.:	=	iry	<b>S</b>	دع			FIELD SCREEN	NG ga
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF MATERIALS		PID (ppm)	Monitoring
-					Sandstone, red, silty, fine-gramoist, no hydrocarbon odor.	nined, slightly	0	
5					Sandstone, light brown, fine-moist, yellowish brown.	grained, slightly	0	
10 -					Sandstone, light brown, very fine-grained, moist, yellowish hydrocarbon odor.	fine-to brown, no	0	
15 -					Sandstone, 15.5 ft. reddish by fine-grained, slightly moist, nodor. Sand, light brownish tan, very no hydrocarbon odor.	o hydrocarbon	0	
20 -					Same as above.		0	
25					Same as above.		0	
30 —					Sandstone, reddish brown, ver fine-grained, slightly moist, (I hydrocarbon odor.	ry fine-to 0 YR 7/4), no	0	
35 —	-				Sandstone, reddish brown, ver fine-grained, slightly moist, no odor.	ry fine-to o hydrocarbon	0	

## OPTECH

OPERATIONAL TECHNOLOGIES CORPORATION

### **LOG OF BORING 7-MW3**

Project No.:

8056-101

Logged By:

M. Ghazizadeh

**Drilling Co.:** 

O'Keefe Drilling

Driller: Date Drilled: Mike Downey

05/01/96

Sampling Method:

Depth Drilled:

**Rock cuttings from Air Rotary** 

70.0 FT.

Depth To Water:

**Date Measured:** 

**Surface Elevation:** 

3667.31 FT.

	ing Me		A	ir Rotar	y-Hammer	TOC Elevation:	360	67.82 FT.	
								ELD SCREENING	Su Su
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF MATERIALS		PID (ppm)		Monitoring Well
					Sandstone, reddish brown, v fine-grained, moisture content slightly at 45 ft.	ery fine-to nt increases	0		
45 <del></del> - - -					Sandstone, reddish brown, n fine-to fine-grained, possibly	ooist, very water at 46 ft.	0		
50 <del>-</del> - - -					Sandstone, at 53 ft. changes color, very fine-to fine-grain hydrocarbon odor.  Sandstone, changes to light g	ed, no	0		
55 — — — —					ft., very fine-grained, no hydry, (10 YR 4/1). Sandstone, light gray. Sandstone, dark gray, very ffine-grained, dry, no hydroc	drocarbon odor,	0		
60 <del></del>  					·		0		
65 —					Sandstone, dark gray, very f fine-grained, (10 YR 4/1).	ine-to	0		
70 <del>-</del> - -	_				Total Depth: 70 F	Γ. BLS.			-
75 — — — —	_								- - -

### OPTECH

### OPERATIONAL TECHNOLOGIES C O R P O R A T I O N

#### **LOG OF BORING 7-MW4**

Project No.:

8056-101

Kathryn Pritchett

Logged By: **Drilling Co.:** 

O'Keefe Drilling Mike Downey

Driller:

Sampling Method: Depth Drilled:

71.0 FT.

Depth To Water:

Date Measured:

**Rock cuttings from Air Rotary** 

Date	Drille	d:	04	4/28/96	•	Surface Elevation	n: 3676.29	FT.	
Drill	ing Me	thod:	H	ollow-S	tem Auger (Surface Drilling)	TOC Elevation:	3675.98	8 FT.	
<u> </u>	9	ery	Se	. <u>.</u> 2			FIELD	SCREENING	ng ng
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF M.	ATERIALS	PID		Monitoring Well
							(ppm)		
5 —				× × × × × × × × × × × × × × × × × × ×	Asphalt.  Silt, little clay, little sand, tragrey (10 YR 4/1), moist, no  Weathered Sandstone, fine-gr	odor.	0		
10 —				x x x x x x x x x x x x x x x x x x x	yellowish brown (10 YR 5/6) little to some gravel (cobbles sandstone, very fine-to medius and).  Collected GC sample.	, some silt, weathered	1.2		
- - - 15 <del>-</del>				× × × × × × × × × × × × × × × × × × ×	constitue de sample.		70 69		
20	_			× × × × × × × × × × × × × × × × × × ×	Siltstone interbedded shale, y (10 YR 5/6) at 17 FT., gram size interbedded, weathered sandstone/siltstone, yellowish	ale to pebble	130		
25	_				5/6) at 18 FT.  Weathered Sandstone/Siltston fine-grained sandstone, yellov YR 5/6).  Weathered Sandstone, fine-granedium-grained, light brown	vish brown (10 rained to	3.4		
30 -					medium-grained, sorted, no hodor, slightly moist, slightly s Sandstone, light brown (10 Y fine-grained, sorted, slightly in hydrocarbon odor, slightly sil	ydrocarbon iilty. R 6/4), noist, no ty.			
35					Sandstone, light red to light b 7/4), fine-grained, silty, no hyodor, slightly moist,.  Sandstone, red, fine-grained,	ydrocarbon			
					odor, silty, slightly moist.				

### OPTECH

OPERATIONAL TECHNOLOGIES CORPORATION

71.0 FT.

**Rock cuttings from Air Rotary** 

#### **LOG OF BORING 7-MW4**

Project No.:

8056-101

Logged By: **Drilling Co.:**  Kathryn Pritchett O'Keefe Drilling

Driller:

Mike Downey

Sampling Method:

Depth Drilled:

Depth To Water:

Date Measured:

Driller:	MIKE DOV	viicy	Surface Elevatio	n: 3676.29 FT.		
Date Drilled:	04/28/96	A (Confine Delling)	TOC Elevation:	3675.98 FT.		
Drilling Method:	Hollow-St	tem Auger (Surface Drilling)	TOC Elevation:	FIELD SCREI	ENTING	
Depth (ft.) Blows/6" % Recovery	Samples Graphic	DESCRIPTION OF M	ATERIALS	ENING	Monitoring Well	
45 —		Sandstone, red, fine-grained silty, slightly moist, no hydrostid slightly moist, no hydrocarbo 7/4).  Sandstone, red, very fine-to sand, slightly moist, no hydr (10 YR 7/4), slight odor at 5 change to light grey color (16 fine-grained sandstone.  Sandstone, light grey, very ffine-grained, thinly-bedded of hydrocarbon odor, sandstone slightly darker at 58 ft.  Sandstone, dark grey (10 YF fine-to fine-grained, no hydrot moist.  Sandstone, dark grey, very ffine-grained, (10 YR 4/1), nodor, not moist.  Total Depth: 71.0 F	fine-grained, on odor, (10 YR)  fine-grained ocarbon odor, (3-54 ft., 54 ft. 0 YR 4/1),  fine-to clay, no cobecoming  R 4/1), very ocarbon odor,	(ppm)		

### OPTECH

### OPERATIONAL TECHNOLOGIES CORPORATION

#### **LOG OF BORING 7-MW5**

					LOG OF BOR	UNG 7-MW5					
Proje	ect No	.:	8	056-101		Sampling Metho	d: R	ock cuttings f	rom Air R	otary	
Logged By: Ka				Kathryn	Pritchett	Depth Drilled:	82	2.0 FT.			
Drilli	Drilling Co.: O'Ke				Drilling	Depth To Water: 52.0 FT. BLS					
Drille	Driller: Mike l			Iike Dov	wney	Date Measured: 04/29/96					
Date				4/28/96		Surface Elevation	n: 30	675.81 FT.			
Drilli	<b>Drilling Method:</b>			Iollow-S	tem Auger	TOC Elevation:	30	675.55 FT. Bl	LS		
	<u> </u>						F	FIELD SCREENING			
Depth (ft.	Depth (ft.)  Blows/6"  Samples  Graphic  Graphic					ATERIALS	PID (ppm)			Monitoring Well	
			-		Asphalt.	/	0				
10				× × × × × × × × × × × × × × × × × × ×	Silt, little to some sand, very coarse-grained sand, brownis YR 6/6), little gravel (pebble Weathered Bedrock, (sandsto Silt, little to some sand, dry, brown (10 YR 6/4), very fine grained sand, weathered, san very fine-grained. Weathered Sandstone, very f sand, very fine-to coarse-grasilt, pebbles and cobbles in cusandstone, light yellowish bro 6/6), dry, brownish yellow. Siltstone, thinly-bedded, shale balls break up like silt. Clay, brown (10 YR 5/3), ba Sandstone, very fine-grained.	ch yellow (10 charge), dry.  ch yellow (10 charge), dry.  ch yellowish charge ined sand, some attings, own (10 YR charge)  lls, moist, wet.	0 120 30 40 5 50 53				
30 -	_				Sandstone, some silt, light ye (10 YR 6/4), very fine-grained very fine-to medium grained well-sorted.  Same as above.	ed sandstone,					
35	-				Sandstone/Siltstone, very pale (10 YR 7/4-7.5 YR 7/4), very sand, dry.  Sandstone, some silt, light ye (10 YR 6/4), very fine-graine	y fine-grained  Ilowish brown,					
			-		moist, well sorted.	u sanu, siigiit					

## OPERATIONAL TECHNOLOGIES

OPERATIONAL TECHNOLOGIES C O R P O R A T I O N

#### **LOG OF BORING 7-MW5**

Project No.: Logged By:

8056-101

0030-101

Kathryn Pritchett

**Drilling Co.:** 

O'Keefe Drilling

Driller:
Date Drilled:

Mike Downey

04/28/96

Sampling Method:

**Rock cuttings from Air Rotary** 

Depth Drilled:

82.0 FT.

Depth To Water:

52.0 FT. BLS

Date Measured:

04/29/96

Surface Elevation:

3675.81 FT.

Date Drilled:	04/28/96	4 <b>A</b>	TOC Elevation: 3675.55 FT. BLS				
Drilling Method:	: Нопом-8	tem Auger	TOC Elevation:		C		
Depth (ft.) Blows/6" % Recovery	Samples Graphic	DESCRIPTION OF M	ATERIALS	FIELD SCREENIN PID (ppm)	Monitoring Well		
50		Same as above, slight odor.  Sandstone, some silt, dark gr moist, very fine-grained sand  Same as above, dark grey, (1)  Shaley Sandstone, silt, grey (1)  well sorted, dry, very fine-gr  Same as above.	1, well sorted.  10 YR 4/1), dry.				
75 — - - - 80 — - - - - - - - - - - - - - - - - - - -		Same as 65-70 ft. interval, de Same as above, dry.  Total Depth: 82.0 F					

### OPTECH

**OPERATIONAL TECHNOLOGIES** CORPORATION

#### **LOG OF BORING 8-MW2**

Project No.:

8056-101

Kathryn Pritchett

Logged By: **Drilling Co.:** 

O'Keefe Drilling

Driller: Date Drilled:

05/02/96

Mike Downey

Sampling Method:

Depth Drilled:

Depth To Water: **Date Measured:** 

**Surface Elevation:** 

**Rock cuttings from Air Rotary** 65.0 FT.

45.0 FT.

05/02/96

3675.90 FT.

Drill	ing M	ethod:	A	ir Rotar	y-Hammer	TOC Elevation:	3675	5.64 FT.	
<b>:</b>	=	ıry	S	ຍ			FIE	LD SCREENIN	G 🚆
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF M	ATERIALS	PID (ppm)		Monitoring Well
10					Sandstone, some silt, yellow YR 5/6), moist, very fine-to sand, well-sorted.  Sandstone/Siltstone, brownis 6/6), dry, very fine-to fine-g well sorted.  Same as above.  Same as above.  Same as above.	medium-grained			

# OPERATIONAL TECHNOLOGIES CORPORATION

#### **LOG OF BORING 8-MW2**

Project No.:

8056-101

Logged By:

Kathryn Pritchett

**Drilling Co.:** 

O'Keefe Drilling

Driller:
Date Drilled:

Mike Downey

05/02/96

Sampling Method:

Rock cuttings from Air Rotary

Depth Drilled:

65.0 FT.

Depth To Water:

45.0 FT.

Date Measured:

05/02/96

**Surface Elevation:** 

3675.90 FT.

Date Drilled:	05/02/96	YY	TOC Elevation: 3675.64 FT.				
Drilling Method:	Air Kotar	y-Hammer	TOC Elevation:				
Depth (ft.) Blows/6" % Recovery	Samples	DESCRIPTION OF M	ATERIALS	PID (ppm)	SCREENING	Monitoring Well	
45 —		Same as above.  Sandstone, light yellowish br 6/4), some silt, very fine-to sand, well-sorted, moist.  Same as above.  Same as above, brown (10 Y Shaley Sandstone, grey (10 Y silt, dry, well-sorted, very fi fine-grained sand.  Same as above.  Same as above, dark grey (1 dark grey (10 YR 3/1).  Same as above, grey (10 YR Total Depth: 65.0 F	TR 5/3). YR 5/1), some ne-to  0 YR 4/1), very				

### OPERATIONAL TECHNOLOGIES CORPORATION

#### LOC OF ROPING 8-MW3

					LOG OF BOR	RING 8-MW3			
Logg Drill Drill Date Drill	Project No.: Logged By: Drilling Co.: Driller: Date Drilled: Drilling Method			'Keefe l like Dov 1/28/96 ir Rotar	•	od: Rock c 65.0 F : 50.0 F 05/02/9 n: 3675.9 3675.6	Rotary		
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF M	ATERIALS	PID (ppm)		Monitoring Well
5 — 10 — 15 — 20 — 30 — 35 — —					Asphalt.  Sandstone, some silt, very fir coarse-grained sand, moderat well-sorted, moist, brownish 6/6).  Sandstone, some silt, very fir medium-grained, brownish ye 6/6), slightly moist, well-sorted dry, very pale brown (10 YR).  Sandstone, some silt, very fired dry, very pale brown (10 YR).  Sandstone, some silt, very firefine-grained sand, moist, well.  Same as above.	tely to yellow (10 YR  ne-to ellow (10 YR  ed.  e-grained sand, 7/4).			

## OPTECH

OPERATIONAL TECHNOLOGIES CORPORATION

#### **LOG OF BORING 8-MW3**

Project No.:

8056-101

Logged By:

Kathryn Pritchett

**Drilling Co.:** 

O'Keefe Drilling

Driller: Date Drilled: Mike Downey

04/28/96

Sampling Method:

Depth Drilled:

Rock cuttings from Air Rotary 65.0 FT.

Depth To Water:

50.0 FT.

Date Measured:

05/02/96

**Surface Elevation:** 

3675.96 FT.

	ing Me		A	ir Rotar	y-Hammer	TOC Elevation:	36'	75.66 FT.		
							FII	ELD SCREE	ENING	g
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF M	IATERIALS	PID (ppm)			Monitoring Well
45 —					Same as above, yellowish by 5/4). Same as above, brown (7.5) Sandstone, some silt, very fine-grained sand, moist, yellowish by 5/4).	YR 5/4).				
55 <del>-</del>  	_				Same as above.  Shaley Sandstone, some silt fine-grained sand, grey (10	, very fine-to YR 5/1), dry.				
60 —					Same as above.					
65 -					Same as above.  Total Depth: 65.0	FT. BLS.				-
70 <del>-</del> - - -										-
75 — — — —										-

### O P T E C H OPERATIONAL TECHNOLOGIES C O R P O R A T I O N

**Rock cuttings from Air Rotary** 

### **LOG OF BORING 8-MW4**

Project No.:

8056-101

Kathryn Pritchett

Logged By: **Drilling Co.:** 

O'Keefe Drilling

Sampling Method:

Depth Drilled:

65.0 FT.

Depth To Water:

40.0 FT.

Drill Date	Drille	d:	N 0	Tike Dov 5/02/96 ir Rotar	•	Date Measured Surface Elevati TOC Elevation	ion: 3674		
					<i>J</i>	200 230 400	FIELD SCREENING		
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF M	ATERIALS	PID (ppm)		Monitoring
45					Same as above, yellowish bro 5/4).  Same as above, yellowish bro 5/6).  Shaley Sandstone, grey (10 Y fine-to fine-grained sand, dry Same as above.  Same as above.  Total Depth: 65.0 F.	own (10 YR TR 5/1), very , well-sorted.			

### OPTECH

**OPERATIONAL TECHNOLOGIES** CORPORATION

#### **LOG OF BORING 8-MW4**

Project No.:

8056-101

Logged By:

Kathryn Pritchett

**Drilling Co.:** Driller:

O'Keefe Drilling Mike Downey

Date Drilled:

05/02/96

Sampling Method: Depth Drilled:

**Rock cuttings from Air Rotary** 

65.0 FT.

Depth To Water:

40.0 FT.

Date Measured:

05/02/96

**Surface Elevation:** 

3674.98 FT.

Drilli	ing Me	ethod:	A	ir Rotar	y-Hammer	<b>TOC Elevation:</b>	3674.	68 FT.	
(		>					FIELI	SCREENING	₽£
Depth (ft.)	Blows/6"	% Recovery	Samples	Graphic	DESCRIPTION OF M	DESCRIPTION OF MATERIALS			Monitoring Well
					Asphalt.				
5 — — — — — 10 —	_				Sandstone, some silt, very the fine-grained sand, brownish 6/6), well-sorted.	fine-to 1 yellow (10 YR			
10 -	_				Same as above, moist.				
15 <del>-</del> -					Same as above.				
20 -	_				Same as above.				
25 <del>-</del>					Same as above.				
30 -	_				Sandstone/Siltstone, very fi sand, moist, very pale brow well-sorted.	ne-to fine-grained yn (10 YR 7/4),			
35 —	_				Sandstone, some silt, light (10 YR 6/4), very fine-to fi moist, well-sorted.	yellowish brown ine-grained sand,			

Project: \_\_\_\_Montana ANG Town/City: Great Falls County: <u>Cascade</u> State: <u>Montana</u> TOC Elev: 3,652.69 Ground Elev.: 3,550.91

Water Level: 44.16

Total Well Depth: 58.3' BLS

Date Installed: 8 May 1996

Drilling Contractor: O' Keefe Drilling

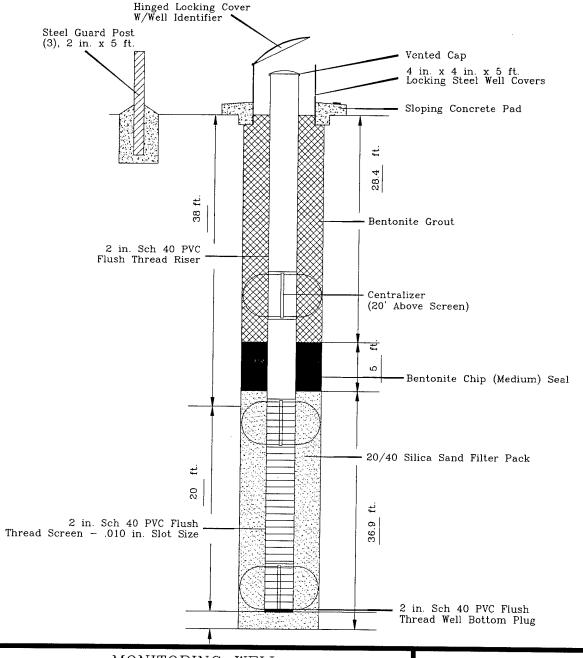
Drilling Method:

Air Rotary

Borehole Diameter: 6"

Development Technique: \_\_\_\_Bailer

Not To Scale



MONITORING WELL CONSTRUCTION LOG WELL NO. 1-MW2

AUGUST 1996

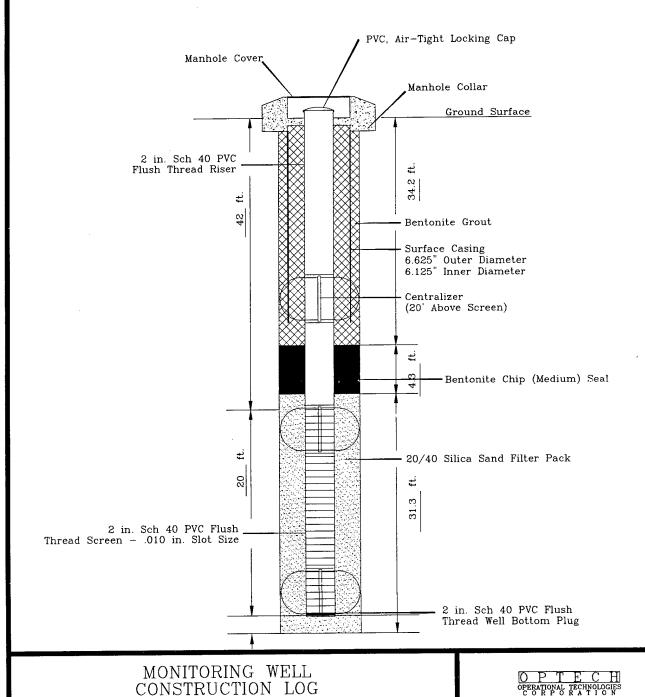
7 May 1996 Date Installed: Project: Montana ANG Drilling Contractor: O' Keefe Drilling Great Falls Town/City: Air Rotary Drilling Method: <u>Cascade</u> State: <u>Montana</u> County: Borehole Diameter: 6" TOC Elev: 3,676.21 Development Technique: Bailer Ground Elev.: 3,676.53 54.86 Water Level:

Total Well Depth: 62.3' BLS

Not To Scale

G-FALLS\MONLOG2

JUNE 1996



WELL NO. 7-MW2

Project: Montana ANG

Town/City: Great Falls

County: Cascade State: Montana

TOC Elev: 3,667.82

 Pavement Elev.:
 3,667.31

 Water Level:
 50.12
 TOC

Total Well Depth: 65.3' BLS

Date Installed: 8 May 1996

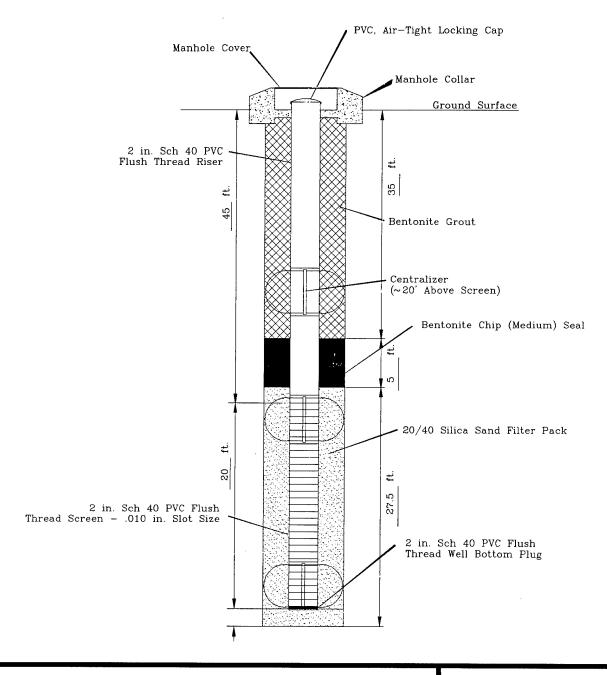
Drilling Contractor: O' Keefe Drilling

Drilling Method: Air Rotary

Borehole Diameter: 6"

Development Technique: Bailer

Not To Scale



MONITORING WELL CONSTRUCTION LOG WELL NO. 7-MW3

OPTECH OPERAȚIONAL ȚECHNOLOGIES

JUNE 1996

Project:Montana ANGDate InstalledTown/City:Great FallsDrilling ConditionCounty:CascadeState: MontanaDrilling MethTOC Elev:3,675.98Borehole Diagram

 Ground Elev.:
 3,676.29

 Water Level:
 58.08
 TOC

Total Well Depth: 62.3' BLS

Date Installed: 7 May 1996

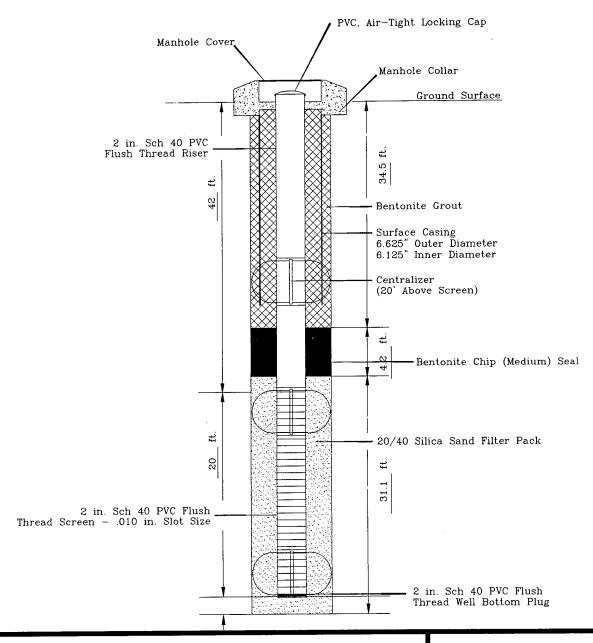
Drilling Contractor: 0' Keefe Drilling

Drilling Method: Air Rotary

Borehole Diameter: 6"

Development Technique: Bailer

Not To Scale



MONITORING WELL CONSTRUCTION LOG WELL NO. 7-MW4



JUNE 1996

Project: Montana ANG

Town/City: Great Falls

County: Cascade State: Montana

TOC Elev: 3,675.55

Ground Elev.: 3,675.81

Water Level: 54.64 TOC

Total Well Depth: 63.3' BLS

Date Installed: 1 May 1996

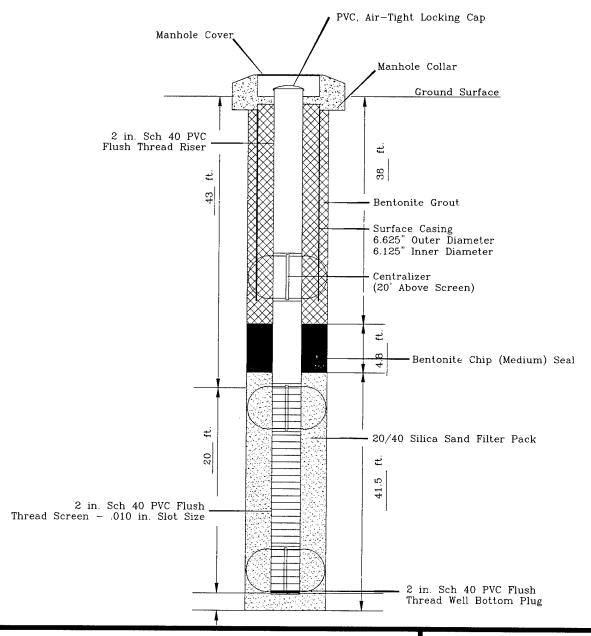
Drilling Contractor: <u>O' Keefe Drilling</u>

Drilling Method: Air Rotary

Borehole Diameter: 6"

Development Technique: Bailer

Not To Scale



MONITORING WELL CONSTRUCTION LOG WELL NO. 7-MW5

OPTECH OPERATIONAL TECHNOLOGIES

JUNE 1996

 Project:
 Montana ANG
 Date Installed

 Town/City:
 Great Falls
 Drilling Contr

 County:
 Cascade
 State: Montana
 Drilling Method

 TOC Elev:
 3,675.64
 Borehole Dian

 Pavement Elev.:
 3,675.90

 Water Level:
 55.28
 TOC

Total Well Depth: 64.3 BLS

Date Installed: 8 May 1996

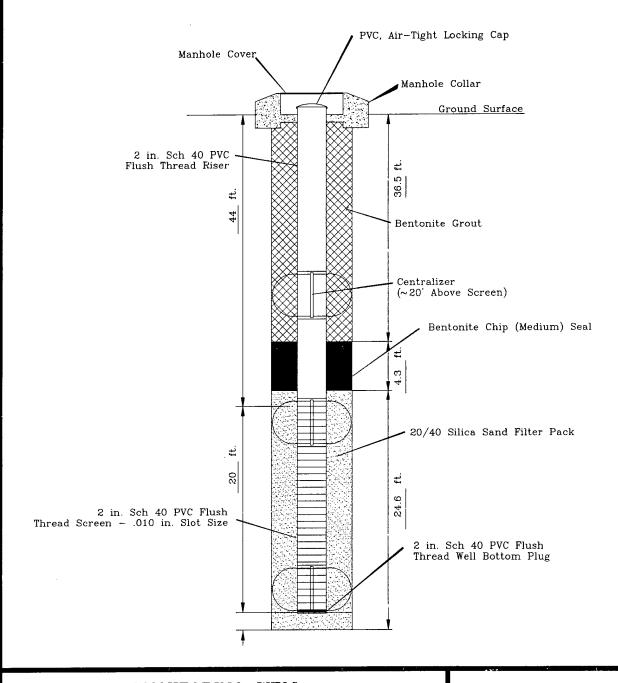
Drilling Contractor: O' Keefe Drilling

Drilling Method: Air Rotary

Borehole Diameter: 6"

Development Technique: Bailer

Not To Scale



MONITORING WELL CONSTRUCTION LOG WELL NO. 8-MW2



Project: Montana ANG

Town/City: Great Falls

County: Cascade State: Montana

TOC Elev: 3,675.86

Ground Elev.: 3,676.16

Water Level: 55.49 TOC

Total Well Depth: 61.3' BLS

Date Installed: 7 May 1996

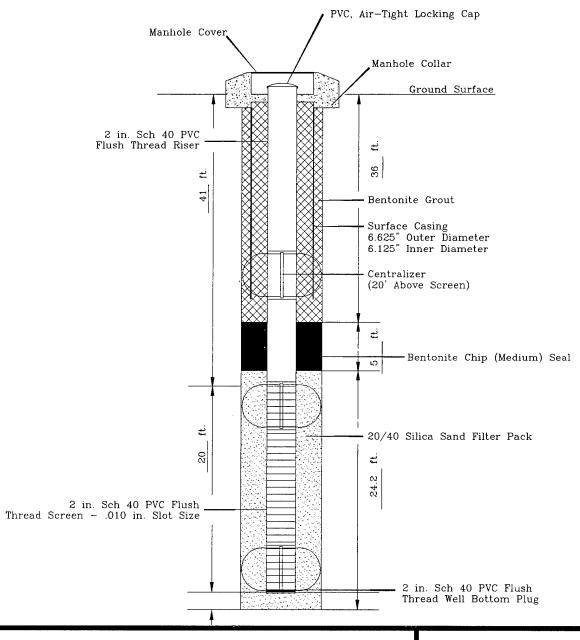
Drilling Contractor: 0' Keefe Drilling

Drilling Method: Air Rotary

Borehole Diameter: 6"

Development Technique: Bailer

Not To Scale

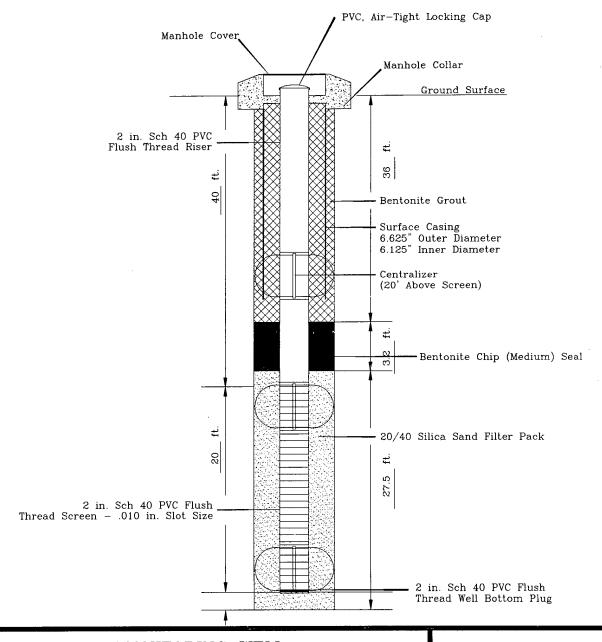


MONITORING WELL CONSTRUCTION LOG WELL NO. 6-MW2

PERATIONAL TECHNOLOGIES

JUNE 1996

Date Installed: 7 May 1996 Montana ANG Project: Drilling Contractor: O' Keefe Drilling Town/City: Great Falls Air Rotary <u>Cascade</u> State: <u>Montana</u> Drilling Method: County: Borehole Diameter: 6" TOC Elev: 3,676.32 Development Technique: Bailer Ground Elev.: 3,676.60 52.24 \_\_\_\_\_TOC Water Level: Not To Scale Total Well Depth: \_\_\_\_\_60.3' BLS



MONITORING WELL CONSTRUCTION LOG WELL NO. 6-MW3

OPTECH OPERATIONAL TECHNOLOGIES CORPORATION

## APPENDIX C MONITORING WELL DEVELOPMENT AND PURGING LOGS

Monitoring Well: /-mw <sup>2</sup>
1209
Development of the second of t
Development End: (Date) 5/11/96 (Time) /60
Developed By: Atheyn Pritchett and Bill Heabery
PID Reading: (Background)
Groundwater: (Water Level) 43,0/ btoc/bls (Well Depth) 60,37 btoc/bls
Volume of Water in the Well: $V_{BH} + V_{Well}$
17 Winds of Water in Well
$V_{(gal)} = [0.0408] \times [Well-Drameter_{(inches)}] \times [Incignition value of the content of the c$
1/2 = 1/2
$V_{(gal)} = 14$ gabs $V_{BH} = (1.40, 40) \mu (0.1) (213 \mu 2)$ gates $V_{(gal)} \times 3 = 51 \mu 2$ $V_{well} = (0.163) (17.36 \text{ ft}) = 2.8 \text{ gates}$
V v3 = (7 m/h) \ well = (0,163) [ 110 F)
(Bail)
Development Method: Baila Containment: 1/03-gel plastic tank
Average Rate of Removal of Water: 0,5 gal/min. builer on dill sig
Average Rate of Removal of Water: 0,0 gairmin. 0,2 gul/min bailer by hard
Weather: Sunny-partly cloudy 0,2 gal/min bailer by new
Comments:

Y: 1

Turbidity

Time	Volume of Water Removed (gallons)	Water Level	Temp (°C)	pH	Conductivity (uS/cm)	Clarity	Remarks
1309	<u> </u>	7999	11.6	7.40	1,460	Clardy	
1423	19 gals	7999	12,6	750	1,440	5/ 404	Ay
1450	24 guls	stopp	ed -	- Cl	int relan	nsi	to bail with 2"x
1455	started	develop	ent a		<u>.</u>		hit will,
1517	38 galo	7999	11.7	7,52	1450	clau	
15058	57 galo	7949	11.4	7.56	1,460	Cler	45
1600	Topped	deve	come	mt	.,		
1							
				K			
				74		ļ	

initial

	Monito	ring Well:	6-t	$n\omega$	3				-
	-	pment Start: (Dat	te) $5/c$	7/46	·	(Time)	1515		-
		pment End : (Da	/			(Time)			
•	Develo	ped By : Okey	e Brillia	5	Clus	helson			
?		ading : (Backgro	A /	ppm	(Read		ррп		
	Ground	lwater : (Water L	evel) 53,06	btoc/bl	s	(Well Dept	th) 60,	36 btoc/bls	
		e of Water in the						19 196	
	-	$V_{(gal)} = [0.0408]$	e [Well Dia	meter <sub>(inc.</sub>	hes)] <sup>2</sup> %	Height of Y	Vater in	Well <sub>(feet)</sub> ]	
		$V_{(gal)} = \bigvee_{i=1}^{gal} ev_i = V_{i+1}$	= VBH + V	well	10.4	٠	_	( ) <b>/</b> 11	
		$V_{(gal)} \times 3 =$	= CD 700	gueign	(0,1)	vwell =	[0.143	sgelft)(Huell)	
int of		pment Method : >	Λ .		Contai	nment : /	100 -	gal plastic	
Hanger		e Rate of Remova			gal/mi	in.			
25	Weathe	r: Cloudy ,	min	<u> </u>					
• ./	Comme	ents:  yels X 3	-> 7	J J A	la		) 4.	0.2 41.0	
V =	6.3	gas X	Turlida	1		Alopped	10 1	let rebuye 110	
					Γ	Conductivity	Clarity	Remarks	
: • 11	Time	Volume of Water Removed (gallons)	Water Level PRIOC	Tenip (°C)	pН	(uS/cm)	stigh	Doupt our	
mitial	1515		236	10.5	7,34	726	cloud	V Duyu VIV.	
	74 15	5 4 gab.	Stopy			rhange			
	5/0444	11	3	11.5	7,14		den	W.L. 5274'BTC	(
	917	g yels	561	11,4	7.54	754	Wine	J- Stopped to	۸ij
Sfut agam	1207	10,5 galo			ppe	de to	race	rge	
1145	1435	12.5 gra		54	opped	L-to M	elling	<u> </u>	
	1610	14.5 gals	,	Stop	ped:	to rech	ange Cloudy		
dest	0745	16.0 gals		13.8	7,61	725	munky	hydraulon odn	
otoppel with	0810		Plo	med	toru	hury			
: Dut	0935	18:5 gel	stopped	To	velus	se 0945			
Kut	10/0	1915 apl	stoppe	d to	1	schoup 1	020		
aturt	1110	2010 gul	Toppe	f to	U	dure 1	115		

Monitoring Well: 6-mw3	3					
Development Start: (Date) 5/4/	96	(*	Γime)			
Development End : (Date)		(*)	Time)	<del> </del>		
Developed By:						
PID Reading : (Background)	ppm	(Reading	)	ppm	<del></del>	
Groundwater: (Water Level)	btoc/bl	s (	Well Depth)		btoc/bis	
Volume of Water in the Well:					•	
$V_{\text{(gal)}} = [0.0408] \times [\text{Well Diag}]$	meter <sub>(inc</sub>	hes)]2 x [H	eight of Wa	ter in <b>V</b>	Veli <sub>(feet)</sub> ]	
$V_{(gal)} =$						
$V_{(gal)} \times 3 =$						
Development Method:		Containn	nent:			<del></del>
Average Rate of Removal of Water:	·	gal/min.				<u></u>
Weather:						
Comments:						

turbility

	Time	Volume of Water Removed (gallons)	Water Level R BTOC	Temp (°C)	рH	Conductivity (uS/cm)	Clarity	Remarks
-	1530	2.5gal	stoppe	d to	rul	wye 1545		57/1/00
	1615	22,5 Mil194 23,0 gar	478	14,0	7,65	712	down	Ptop 1625 11/90
-								
			·			•		
				4	11			
					47			
ľ								
I								
				·				

Otent olart

	Monitoring Well: 6-mwz
	Development Start: (Date) 5/9/96 (Time) 1/00
	Development End: (Date) (Time)
•	Developed By: O'Keefe Drilling - Clint Kelow
<b>.</b>	PID Reading: (Background) ppm (Reading) 8,9 ppm
•	Groundwater: (Water Level) 56.49 btoc/bis (Well Depth) 6/, 27 btoc/bis
	Volume of Water in the Well: M 5/9/96
•	N 10 04081 v [Wolf Diameter 12 v [Height of Water in Well c]
	V <sub>(gal)</sub> = V <sub>dw</sub> , = V <sub>BH</sub> + Y <sub>well</sub> V <sub>well</sub> (0,1/63 gal /ft)(1+well)  V <sub>(gal)</sub> × 3 = V <sub>BH</sub> (1,468 gal (ft) (0,4) 2" × 5  Development Method: Bailer (5+winloss steel)  Containment: The gallor plantic  tark
	Average Rate of Removal of Water: gal/min.
÷	Weather:
:	Comments: V= 4,2 gabs X -> 12.5 gals  Turbilly  Turbilly  Turbilly
.:	Time Volume of Water Removed (gallons)    Volume of Water Removed (gallons)   Removed
Initial	1115 872 10.0 7.65 759 Cloudy
	1125 25 Stopped to reclarge
	1152 started sevelopment
	1202 3 gel > 1000 8,9 7,91 - 860 cloudy
	Stopped clevelyment to recrise
j.	1315 Stilled - removed ~ 0,5 gets
- 44	1330 Stopped to reclarge
Started 1545	1549 4 gals 7999 9,6 7.70 830 iloudy Stopped to rechan
21 5/10/94	147 initial for 429 11,5 7,87 834 sight - clear
144 744	756 Ggels - 5 + 40 per to herrege
- Start	1438 8,5 gals 7999 11,5 7,91 890 clouds
July 1	1816 10,5 galo 10,6 7.45 836 miles hydrerallos
<b>0.6</b> ~~ 1.	stopped 08th pr rechner

-	- *** 11.	6 MW	v e	int.			
Monitor	ring Well:	-/0/		<u>~</u> -	(Time)		
	oment Start: (Dat		46		(Time)		
Develop	oment End : (Dat	te)	100		(Thic)	Tels	m
Develop	ped By: 0/	Keye Tr					
PID Re	ading : (Backgrou	und)	ppm	(Readi		ppm	1 / . 1 .
Ground	water: (Water L	evel)	btoc/bls	3	(Well Dept	h)	btoc/bls
Volume	of Water in the	Well:					
•	$V_{(gal)} = [0.0408]$	(Well Diar	neter <sub>(inch</sub>	<sub>ics)</sub> ] <sup>2</sup> x [	Height of V	Vater in	Well <sub>(feet)</sub> ]
•	$V_{(gal)} =$						
	$V_{(gal)} \times 3 =$ coment Method:	Rule -	- New	Contain	nment :		
				gal/mi			
	Rate of Remova	_		gannin	11.	<u>-</u>	
Weather	r: Ug vay	, core		. <u></u>			
Comme	nts:						
		Turbility				, ···	
Time	Volume of Water Removed (gallons)	Water Level R BTOC	Tenip (°C)	рH	Conductivity (uS/cm)	Clarity	Remarks
371149	11.5 pol	atome	1 to	12	chause	0955	
1025	12.5 and .		11.0	7.60	845	cloudy	
1/00	13,562		11.5	7.64	857	Cloudy	
	7				-		
ļ		<u> </u>					
				<u> </u>		ļ	

plant start

Monitoring Well: 7-MWZ
Development Start: (Date) 5/9/90 (Time) \$50
Development End: (Date) 5/9/96 (Time) 1040
Developed By: O'Keek Drilling - Unt relson
PID Reading: (Background) O ppm (Reading) 3, 2 ppm
Groundwater: (Water Level) 54,55btoc/bls (Well Depth) 62.48 btoc/bls
Volume of Water in the Well: $\nu 5/9/46$
$V_{\text{(gal)}} = [0.0408] \times [\text{Well Diameter}_{\text{(inches)}}]^2 \times [\text{Height of Water in Well}_{\text{(fect)}}]$ $V_{\text{(gal)}} = V_{\text{BH}} = (1.468 \text{ gal ff})(0.4)  V_{\text{well}} = (0.043 \text{ gal ff})(0.04)  V_{\text{(gal)}} \times 3 = (0.0408) \times$
Average Rate of Removal of Water: gal/min.
Weather: Snow (light medium)
Comments: Decontaminated bailor by Stean clean  [NIW]  [Autor Conductivity Clarity Remarks
Time Volume of Water Water Levely Temp Conductivity Clarity Remarks Removed (gallons) R BFOC CC pH (uS/cm)
905 - >999, 95 7,80 800 Roug

Antisl

		Turbed	\				
Time	Volume of Water Removed (gallons)	Water Level	<b>V</b>	рН	Conductivity (uS/cm)	Clarity	Remarks
905		5999	9,5	7,80	900	Cloudy	
925	11,0	1202	10,5	6.95	960	Clary	erra in tuledy
958	22.0	7499	11.0	6.97		Clarky	
1035	33.0	580	10,8	7.01	971	Slight	
1040	13510	Styp	ped	Der	elopne	$\star$	
					0		
	:			/			
				X			

Monitoring Well: 7-m w3	
[Violintoring]	)
Development otals. (2 de)	
Development End . (Date)	10 He Aberer
PID Reading: (Background): 6 ppm (22222)	ppm / handle
Groundwater: (Water Level) 50.51 (otoc) tols (Well Depth)	DBH: 68.5'BLS
Volume of Water in the Well;	_
	er in Well (rect)
المُرَاكِينَ لا الله الله الله الله الله الله الله	) (0.4) (7.99 pt) = 10.6
$V_{\text{(gal)}} = 13$ gala $V_{\text{(gal)}} \times 3 = 39$ gala $V_{\text{(gal)}} \times 3 = 39$ gala	(M.99 ft) = 2.4 pc
Development Method: Bailen Containment: 1/16	as- gal plastic
Development viction . Page 19	as- gal plastic tank
Average Rate of Removal of Water: gal/min.	
Weather: Cloudy; 40%	- 11-10
Comments: alway agha takiway Moul	1+ model 406040
Turlidity	406040
Time Volume of Water Water Lord Temp Conductivity Cla	arity Remarks
Removed (Entions)	love
	lowly
	long-slighty clarity
Stopped 12.27.51.741 pcs	Dule
1255 39 cal 7999 12.2 7.51 741 CE	20rdy
1400 56 Cal 1799 1111 141 193 V	loud
	Talay
Swa ay /	
MAG	
17746	
	<b> </b>

initral

Fank

	Monito	oring Well:	7-mu	u5				
		opment Start: (Da	te) 5/9	190		(Time)	14 25	
		pment End: (Da	•	l 		(Time)		
	Develo	ped By : Okeef	e Dullin	<u> </u>			lson	
:		eading: (Backgro	_	ppm	(Read		ppm	
	Ground	dwater : (Water L	evel)53,58	btoc/bl	s	(Well Dept	(h) 63,3	btoc/bls
	Volum	e of Water in the	Well: V	B# = 1	6,87	gala V	well=	TDBH 82.3 BLS
		V <sub>(gal)</sub> = [0.0408] :	<del>x [Well Dia</del>	meter <sub>(incl</sub>	1 <sup>2</sup> x	Height of \	Vater in	Well <sub>(fcct)</sub> ]
		$V_{(gal)} = V_{(gal)}.$ $V_{(gal)} \times 3 = V$	= VBH +1 BH Cliff	well grant got	) (o. 4	(484)(v V		Coill3 gol) (+) Hwell
		pment Method:					1,100	- get plastic
		e Rate of Remov			gal/m	in.		
		er: Cloudy, ,	~			- 1	Vie	el X
V		ents: 8,5 gals	X3 -	dity	53	stopped	to M	lux 1570570/96n
	Time	Volume of Water Removed (gallons)	Water Level ft BTOC	Tenip	pH	Conductivity (uS/cm)	Clarity	Remarks
Instead	1429		776	10,9	7,57	642	"My "	digital - los
~	1445	4 gulo	- 5tg	gred 7	مه ما	duy		
Started >	1604	8 straits	- 5to	aped	to a	echage		
1525	1646	8,5 gas	11					
1442	402	//	534	11.9	7.77	773	Stylly	- W.L. 5 5.18
146	813	10.52 Helms	- Stop	ped to	rev	large		
Started	1511	11 guls	292	13.1	FAH	898	Cleu	\ <u>-</u> `
. 12	1521	12 guls	- 54	pped	-+	recla	ge	
	1647	13 gal	- 5-top	red -	A	echngo		
	1714	13 gress	S	13.91	2251	980	lea	~
		Stopp	red de	velin	7150	> u	ear	
		70		100				

113/46

3 6 14	ring Well:	7-m	WY		,		
	ring Well: pment Start: (Dat	e) 5/9	7/94	e	(Time)	1450	
		- ' / <sub>'</sub>	6/94	2	(Time)	756	
	pment End : (Dat				int hel	son	
	ped By: O keef		mg		ng) 3,8		
PID Re	<u>ading : (Backgro</u> i	und) <i>O</i>			(Well Depti	\ 67 m	
Ground	water: (Water L	evel) 58, 38	btoc/bls	3	(Well Depti		. •
Volume	of Water in the	Well:				MS	70/AV
•	<del>V<sub>(ral)</sub> = [0.0408] &gt;</del>	<del>(Well Dia</del> r	neter <sub>(inch</sub>	2 x [	Height of V	<del>Vater in</del>	Well(Geet) Vweel =
	$V_{ij} = V dw$	: = VBH +	Vivell	<b>\</b>	V	H= =	7,3 gels gals
	v v 3 = Ve	H = (1,468	'gal/fit	YOU	4) Vuel	260,14	7,3 geb 0. Falo 3 gel ft) (Hwell)
	oment Method :			Contai	nment: /	[w-	gal plastic
	D-4CD-marie	of Water :		gal/mi	n.		Faste
Average	e Rate of Remova	al of water.	1-11	<u> </u>	konny in	afte	mon on 5/10/96
	r: Cloudy	) LANG	aga )	tel		Usa	Nima
Comme	ents: 8,0 gal	s pur u	une	740	6	7 250	15/6
						•	1 12 1 7 1
	Jun talk	Tunka	1	MA	ped to	velen	plons e s/9/96 µ
Time	Volume of Water	Water Lord	Temp	pH	Conductivity (uS/cm)	Clarity	Remarks
	they rains	Turbon	<del></del>		Conductivity		Remarks
Time 1453	Volume of Water	Water Lovel PHTOC  7999	Temp (°C)	рН 7,35	Conductivity	Clarity Cloudy Sught	Remarks
	Volume of Water	Water Lovel BRIOC  7949	Temp	7,35 1 +8	Conductivity (uS/cm)	Clarity Cloudy Sught	Remarks
	Volume of Water	Water Lovel PHTOC  7999	Tenip CS 9,9 toppes 9,6	7,35 1 +2 7,34	Conductivity (uS/cm) (SFR) (NOTE OF THE OF T	Clarity Cloudy Dught	Remarks
1455 1500 1642 815	Valume of Water Removed (gallons)  > 599 ff  3 gala  8 gala	Water Lovel  DATOC  7999 5  95  115	Tenip CS) 9,9 topped 9,6	7,35 L 42 7,34 7,22	Conductivity (uS/cm)  638  Neckey 873	Clarity Cloudy Olight Llive	Remarks
1455 1500 1642 815 233	Valume of Water Removed (gallons)  > 599 ff  3 gala  8 gala  10 gala	Water Lovel  DATOC  7999 5  95  115	Tenip CS 9,9 toppes 9,6	7,35 1 +2 7,34	Conductivity (uS/cm) (SFR) (NOTE OF THE OF T	Clarity Cloudy Olight Llive	Remarks
1455 1500 1642 815	Valume of Water Removed (gallons)  > 599 ff  3 gala  8 gala	Water Lovel  18 170C  79 49	Temp (CO) 9,9 foppes 9,6 10:9 ppes	7,35 1 to 7,34 7,22 to	Conductivity (uS/cm)  638  873  726  sunge	Clarity Clouds Sheple Clary Clien	Remarks oder  by Shopped to  rectang  W.L. 56.5' BTX.
1455 1500 1642 815 £33 1204 1215 1515	Valume of Water Removed (gallons)  > 599 ff  3 gala  8 gala  10 gala	Water Lovel  DATOC  7999 5  95  115	Tenip CS) 9,9 topped 9,6	7,35 1 to 7,34 7,22 to	Conductivity (uS/cm)  638  Neckey 873	Clarity Cloudy Olight Llive	Remarks oder  by Shopped to  rectang  W.L. 56.5' BTX.
1455 1500 1642 815 233 1204 1215 1515	Volume of Water Removed (gallons)  > 599 ff -  3 gala  8 gala  10 gala  13 gala  16 gala	Water Lovel  PATOC  7949	Temp (CO) 9,9 foppes 9,6 10:9 ppes	7,35 1 to 7,34 7,22 to	Conductivity (uS/cm)  638  873  726  sunge radage	Clarity Cloude Slight Clin Clin Clin Clin	Remarks  ola  y Shappad to  w.L. 56.5' RTX  ty claudy—  - Shappad to  rectang
1455 1500 1642 815 £33 1204 1215 1515	Volume of Water Removed (gallons)  > 599 ff -  3 gala  8 gala  10 gala  13 gala  10 gala  10 gala  20.5 gala	Water Lovel  PATOC  7949	Temp (CS) 9,9 foppes 9,6 10:9 ppes	7,35 1 to 7,34 7,22 to	Conductivity (uS/cm)  638  873  726  sunge radage	Clarity Cloude Slight Clin Clin Clin Clin	Remarks oder  by Shopped to  rectang  W.L. 56.5' BTX.
1455 1500 1642 815 233 1235 1235 1235 1235 1644	Volume of Water Removed (gallons)  > 599 ff -  3 gala  8 gala  10 gala  13 gala  16 gala	Water Lovel  PATOC  7949	Temp (CS) 9,9 foppes 9,6 10:9 ppes	7,35 1 to 7,34 7,22 to	Conductivity (uS/cm)  638  873  726  sunge radage	Clarity Cloude Slight Clin Clin Clin Clin	Remarks  ola  y Shappad to  w.L. 56.5' RTX  ty claudy—  - Shappad to  rectang
1455 1500 1642 815 233 1235 1235 1235 1235 1644	Volume of Water Removed (gallons)  > 599 ff -  3 gala  8 gala  10 gala  13 gala  10 gala  10 gala  20.5 gala	Water Lovel  PATOC  7949	Temp (CS) 9,9 foppes 9,6 10:9 ppes	7,35 1 to 7,34 7,22 to	Conductivity (us/cm)  638  873  726  serringe reclarge 920  to rack	Clarity Cloude Slight Clin Clin Clin Clin	Remarks  ola  y Shappad to  w.L. 56.5' RTX  ty claudy—  - Shappad to  rectang

Monito		3-mu				aus	
Develo	pment Start: (Da	te) 5/10/1	(i 6)		(Time)	940	
	pment End: (Da				(Time)	1220	
Develo	ped By: O	Keefe	Dril	ling	<u>- Cl</u>	int	relson
PID Re	ading : (Backgro	und) ( 0,4	$\mathcal{U}_{ ext{ppm}}$	(Read	ing) ///	ррп	1
Ground	lwater : (Water L	evel) 5/, 4	y otocybl	s	(Well Dept	th) (14,3	Hotog/bls
	of Water in the						,
	$\mathbf{V}_{(gal)} = [0.0408]$	x [Well Dia	meter <sub>(incl</sub>	hes) X	Height of \	<del>Vater in</del>	Well
	$V_{(gal)} = \int b_i q$		i	, ,	1/		<i>A</i>
	$V_{(gal)} \times 3 = 32.$	7 11/2	-	VDH.	= (1.46	g) (0	(4) (14,96")= 1900 HBH
	oment Method:	1 .	Vue	μ = (t Contai	163) (12,937 nment H	1 = 31	gale to
	e Rate of Remov			gal/m	WCO(	1,700	tane
	- Aic of Remove	Ten	270	<del> </del>			
Weathe	r. cooling	n. 1			. 1 /2	- 1/1.4	-test
Comme	nts: good	, /na	- rec	ひかつへ	end for		•
		Turbility		<del></del>		<del></del>	<del></del>
Time	Volume of Water Removed (gallons)	Water Level	Tenip (°C)	pH	Conductivity (uS/cm)	Clarity	Remarks
940	•	799	12.2	7,35	893	Uoudy	
1025	11 gala	7949	11,5	7.56	945	cloudy	
1109	22 gals	7999	10.7	7.52	935	cloud	<b>-</b>
1118	2624 pul	- Stope	nel	40	iedage	_	
1//40	- 26,5	- 0					to men to
1220	33 gels		117	7.50	940	cles	, According
	7	Store	ped	10	,940 velopno	n-t	
				ue .	Jacqui.		
		<del>\</del>			)		
			1				
<b> </b>		<del></del>	<del> </del>	$\rightarrow$			
			1 . 1	1		l I	1

	Monito	ring Well: 8-	- Inw	Υ				
		pment Start: (Dat	-/	101		(Time)	215	
		pment End : (Da	:_ <i>1</i>	0/96		(Time)	732	
		ped By: 0/		Dril	ling	- Cl	int 1	relson
•		ading: (Backgro		ppm	(Readi	ng) O	ppm	
							h) 60,	btoo bis
	Grouna	water ( water L	wall. V	14 +	Vurel	VBH	= (1.4	(17.68 geffy) (0.4) (14.68 gefft) (12.32') Well ([cet])
	Volume	of Water in the	Well:	oil gel	· + 1.	2 yeld	veel (d	Well (18.30)
		$V_{(gal)} = [0.0408] \Rightarrow$	x [Well Dia	meter <sub>(inch</sub>	<sub>ies)</sub> ] X [	Height of v	, week	(leet))
	•	$V_{(gal)} = I_{O_i} \mathcal{B}$	ges					
	,	$V_{(gal)} \times 3 = 32$	.3 yus	<i>i - 4</i> ]			1 1.	A state
]	Develop	oment Method:	Bailer	(2")	Contai	nment :	1,100	- gal platie
3	Average	e Rate of Remova	al of Water:		gal/mi	n.	. <del> </del>	
•	Weathe	r: Cloudy	130%	,				
(	Comme	nts:	,					
			Turbi	ditis				
[			i				Clarity	Remarks
	Time	Volume of Water Removed (galions)	Water Level	Temp (°C)	pН	Conductivity (uS/cm)	slight	4
	145		115	1/4	7.18	785	10	U
		`		1100	1,,,,	7 03	uas	4
	1737	AP 7 64	12 -				day	y y
Start	13304	#7 7 gs	b -			reclarge	dous	y by - Shapped to
stat 521	/237  330 <sup>/3</sup>		6 7999	5 tggz.	es_to 7,62	reclarge 834	dan	y by - Shopped to do
	133013	16 gas	6 - 6 7999 6 -	5 type 12,1 5 typ	es to 7,62 ped	reclarge 834 to recla	se	by - Shopped to de
521	133° <sup>13</sup> 5 /635	16 gas	6 - 67999 6 - 97999	5 toppe 12.j 5 top	254 7,62 ped 7,54	reduge 834 to reda 864	ge Clar	by - Shipped to rectar
521	133013	16 gas	6 - 6 7999 6 - 7999 7999	5 toppe 12.j 5 top 11.5	25 to 7,62 pech 7,54 7,52	834 70 recha 864 857	ge Clar	by - Shipped to reduce out - shipty cloudy the cloudy
521	133° <sup>13</sup> 5 /635	16 gas	6 - 67999 6 - 97999	5 toppe 12.j 5 top 11.5	254 7,62 ped 7,54	834 70 recha 864 857	ge Clar	
521	133° <sup>13</sup> 5 /635	16 gas	6 - 6 7999 6 - 7999 7999	5 toppe 12.j 5 top 11.5	25 to 7,62 pech 7,54 7,52	834 70 recha 864 857	ge Clar	
521	133° <sup>13</sup> 5 /635	16 gas	6 - 6 7999 6 - 7999 7999	5 toppe 12.j 5 top 11.5	25 to 7,62 pech 7,54 7,52	834 70 recha 864 857	ge Clar	
521	133° <sup>13</sup> 5 /635	16 gas	6 - 6 7999 6 - 7999 7999	5 toppe 12.j 5 top 11.5	25 to 7,62 pech 7,54 7,52	834 70 recha 864 857	ge Clar	
11	133° <sup>13</sup> 5 /635	16 gas	6 - 6 7999 6 - 7999 7999	5 toppe 12.j 5 top 11.5	25 to 7,62 pech 7,54 7,52	834 70 recha 864 857	ge Clar	

initial

	Monitoring Well: $l-hw3$											
		pment Start: (Da	te) $5/10$	196		(Time)						
		pment End : (Da	-			(Time)						
		ped By: 0	Keeje	Dil	ing	- Clini	t re	lsor				
÷	PID Re	ading : (Backgro	und) O	ppm	(Read		ррп	4				
	Ground	Groundwater: (Water Level) 47, 46toc bls (Well Depth) 57,00 (btoc) bls										
	Volum	Volume of Water in the Well: $V_{BH} = (1.468 \text{ calff}) (0.4) (6.96 \text{ calff})$										
		Volume of Water in the Well: $V_{SH} = (1.46\%) \times (9.4\%)$ $V_{(gal)} = 10.0408 \times [Well Diameter_{(inches)}] \times [Height of Water In Well_{(feet)}]$										
		great the second se										
		$V_{(gal)} = 11.5 \text{ gals}$ $V_{(gal)} \times 3 = 34.5 \text{ gals}$										
		pment Method:			Conta	inment :	100-	gal plastic				
		e Rate of Remov			gal/m	in.						
÷	Weathe	r: Cloudy	· 30	6.	slight	x 1-1	1W W	ind				
4	Comme	ents :	,	,								
Turbidity												
44	Time	Volume of Water Removed (gallons)	Water Level	Тепір (°С)	pH	Conductivity (uS/cm)	Clarity	Remarks				
mitial	1/33		730	11,0	7,22	871	day	4				
	1152	5 gals	- 57	goped	40,	echange		clardy				
) fact	1345	6 yab	- Stope	pea.	to re	ellarge		<i>V</i>				
A9 13	1525	-street 7 g	als to re	eluse		•						
	1644-	7.5 geb		, 8	echo	go -	- cla	dy				
ntert o	311146	9.548	_	10.8	7.4/	722	Clou	<b>9</b> °				
toppt		Haral	To red	uge	0415							
N SIUlay	1000	start at 11.20	Eleps.	el to	nec	hurez						
atent	1430	11.5 sul	849	12.8	7.56	7						
5/12/96	1330-	13.5 guls	— Stopy	ved-to	recl	age - d	wied c	ry				
~~	1355	13,5 gab	7999	15,2	7,68	720	Slyp	ty clarky				
							, i					

I gala readings

MANG- Great Falls 1-mw2
Installation:  Client/Project: HAZWRAP/ Growt Falls Site:
Sampled By: Katheyn, Pattlett   mee . Sample No: 1-MWZ - GWZ
Sampled By Carrier ( A / )
Sample Start. (Date) 91-12 (Line)
Background PID Reading: Oppm PID Reading: Oppm
Depth to Water (BTOC): 49,90
Screen Interval: 40 - 60' 123
Sampling method: Dailer 2"
Sampling Equipment:
Sampling Equipment Decontamination method:
- new disposable bailor
Weather: aloney, 506
Lab Analyses:
(including preservatives and filtering if applicable) VOCS (CLP) (4) 40-ml VOA HCC SUOCS (CLP) (2) 1-l ambou TPH (8015) GRO (2) 40-ml VOA HCC
QA/QC Samples: netco ((LP) // 1-l Poly HAVO2 - lich unfittares
- 1-mw2-6w2A and fittered (0,45mg
Comments:

(including depth of pump if used for sampling)

Time	Temperature (°C)	pН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks
10/8	10,0	7.44	1,550	122	clean
		L		· .	
		74			

	Installation:  ANG Well No. 1-MW    Client/Project: HAZWRAP   Great Falls Site:  Sampled By: Katheyn, Peticlett   mue chara Sample No: 1- mw (-Gw)  Sample Start: (Date) \$16   90 (Time) Jay \$75 Sample End: (Date) (Time)  Background PID Reading: 0 ppm    Depth to Water (BTOC): 56,62 BTOC 5/16/96 (1830) 56.9( BTSC Screen Interval:  Sampling method: Buly 2"  Sampling Equipment:
	Sampling Equipment Decontamination method:  — Kew diaposable baila
	Weather: Clarky, 500
	Lab Analyses: (including preservatives and filtering if applicable)  VOC3 (CLP) (4) 40 ml VOA (KL)  SVOC3 (CLP) (2) 1-L amber
eu	TPH (8015) GRO Q) 40-Me VDA HCQ DRO (1) 1-l amber QA/QC Samples: metals (CLP) (1) 1-l Poly HNO3 - excl unfiltered and fittered (0.45 pm)
5/16/96	Comments:  (including depth of pump if used for sampling)  1830 - Collected VOC5 (CLP) and TPH (8015) GRO.  also att culteted a 1/4-L TPH (8015) DRO.  Bailed dry. W.L. 56,62'800CTD: 57.75'BTOC  Loss - Collected an additional 44-L TPH (8015) DRO.
5/17/9	658 - Calletted in selditional 4-l TPH (8015) DRs.
)/( ( )	Time Temperature pH Conductivity Clarity/ Remarks (uS/cm) Turbidity
nd wa	W.L. 56.91"
	BTOC
	<u> </u>

Installation: MANG - Great Well No. 6-MW/
Installation. 74 1 10 1 10 10 10 10 10 10 10 10 10 10 10
Chent/Project: Por Super Chent/Project: Por Chent/P
Sampled By: Katheyn Partition (March 1977) (Time) (Time) (Time)
Sample Start: (Date) 1/14/40(Time) 1/C. Sample Start:
Depth to Water (BTOC): 47, 79
Screen Interval:
Sampling method: Buler 24
Sampling Equipment:
Sampling Equipment Decontamination method:  — New disposable disposable bailer
Weather: Cloudy, 500, N-NW winds, lo mph
Lab Analyses:
(including preservatives and filtering if applicable)  VOL3 ((LP) (4) 40-ml VOA vial Hel  SVOCS ((LP) (2) 1-l amber  TPH (805) TP GRO (2) 40-ml towards Hel  Metala ((LP) (1) DRO (1) 1-l amber  QA/QC Samples:  (0,45 pm)  and unfittered
QA/QC Samples: (1) II Poly HNO3 in filtered (0,45 pm) and unfittered

Comments:

(including depth of pump if used for sampling)

Poor producer /

Time	Temperature (°C)	pН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks
853	14,8	7.53	762	244	Slightly Clarky
		1			

Installation:	MANG	_ Gn	ent Fill	ell No.	6-mw2	
Client/Project	ct: HAZWRA	016	est Full Si	te: 6		
Sampled By:	Kathern PRis				6-my-6w1	
	:: (Date) 5/13/				(Date) 5/13/96(Time) 1549	7
Background	PID Reading:	OV	on PI	D Reading:	Doom.	
Depth to Wa	PID Reading: ter (BTOC):	55,6			//	
Screen Inter		1-61	BLS			
Sampling me	thod:	Sailor	24			
Sampling Eq		V				
	uipment Deco	ntamina	tion method:			
	•		ew disp	puble b	suler	
Weather:	Cloudy, 5					
Lab Analyses (including pre VOC SVBC TP H Met QA/QC Samp	eservatives and s  (CLP)  (CLP)  (EUS)  (CLP)  (OLP)  (OLP)	d filterin (2) (2) 60 00 (1) (-	g if applicable  I-L ambu  H(L (L)  (I) I-L a  L Poly H,	er Yo-ml Yo-ml b mber No3 (fil	VOA vida  Hered and impittared)  Or45 pum fils	te.
Comments:				:		
(including dep	th of pump if	used for	sampling)			
·	W Coll	estel	VOCs	, TPH, A	ine 1/4 svoks from	
,	1400 - 143	4 -	Stopped	to sec	large well	
					eding tell	
Time	Temperature	pН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
1547		156	818	4/4/2	Wightly Clarke	

Installation. MANG - Great Falls ANG Well No. 6-MW3
or in the state of
Sampled By:  Sampled By:  Sample No: 6-mu3-6wl
Sample Start: (Date) 5/14/94 (Time) 10/5. Sample End: (Date) 5/14/94 (Time) 1/05
Background PID Reading: Oppm PID Reading: 10,4 ppm
Depth to Water (BTOC):
Screen Interval: 40-60 BLS
Sampling method: Bailer, 2"
Sampling Equipment:
Sampling Equipment Decontamination method:
Sampling Equipment Decontamination memod.
- New disposable barler
Weather:
Lab Analyses:  (including preservatives and filtering if applicable)  (including preservatives and filtering if applicable)  (i) (5 (CLP) - (4) 40-ml VOA Villa HCl  5VU(5 (CLP) - (2) 1-l amber  TPH (8015) GRO (2) 40-ml VOA villa HCl  TPH (8015) GRO (1) 1-l amber  DRO (1) 1-l amber  QA/QC Samples: Matab (CLP) (1) 1-l Poly HNO3 > exch infiltered  and filtered  (0.45 pim)

Comments:

(including depth of pump if used for sampling)

Time	Temperature (°C)	pН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
1/11	14,5	7.98	761	41	slightly cloudy - cla	in
		11/-	)			
		1	~			

Installation: MANG, Well No. 77NW2
Client Project: 4224 19AD   March Falle Site: 7
Sample No: + -MW2- GWI
Sample Start: (Date) 3/12/46 (Time) 1500 Sample End: (Date) 5/12/94 (Time) 1500
Background PID Reading: 0 00m PID Reading: 5,2 pgm
Depth to Water (BTOC): 55.38
Screen Interval: 42-62' BLS
Sampling method: bailar - 2"
Sampling Equipment:
Sampling Equipment Decontamination method:
- ren disposable barter
Weather: Putty dardy, Temp 500, high winds
Lab Analyses:
(including preservatives and filtering if applicable)  VOC5 (CLP) HCL - (4) 40-ml VOA vido  5VOC5 (CLP) - (2) (-l amber  TPH (8015) GRO-HCl-(2) 40-ml VOA vide DRO - (1) 1-l amber  Methols (CLP) HNO3 piltered and norfeltered (0.45 pm filter)  QA/QC Samples: - (1) 1-l poly each

Comments:

Time	Temperature (°C)	pН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks
1505	14.6	7.69	130	77	Clean
		1	<b></b>		
		A A			

MANG- Great Falls Well No 7-MW3
Installation: AND WELLING
Client/Project: HAZWRAP   Great Fall Site: 7
Completed Boulett Boulett and Catalog ample No. / 1100
Sample Start: (Date) 5//5/96 (Time) / 075. Sample End. (Date) 3/-3/14 (Time)
Background PID Reading: 075 ppm PID Reading: 075 ppm
Depth to Water (BTOC): 50.21
Screen Interval: 45 - 65' BLS
Sampling method: Bailer 2
Sampling Equipment:
Sampling Equipment Decontamination method:
- new disposable bailer
Weather: Clardy, 50%
Lab Analyses: (including preservatives and filtering if applicable)  VOLs (CLP) (4) 40-ml VOA HCO  SVOCS (CLP) (2) 1-l amber  TPH (8015) (2) 40-ml VOA HCO
QA/QC Samples: GRO
$\mathcal{D}_{\mathcal{O}}$
eplicate moth ((10) (1) 1-le Poly HNO3
T-MW3-GWZA  Metals (CLP) (1) 1-l. Poly HNO3  -each implified and filtered (0.45 pm)
Comments:
(including depth of pump if used for sampling)

Time	Temperature	pН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
1120	11.8	AP (	8/0	746	slightly cloudy-	Cless
		7,01	i D			
			14			

Installation: MANG-Great Falls Well No. 7-MW4
Client/Project: HAZWRAP Site: 7
Client/Project: HAZWRAP / Site: + Sampled By: KAtheyn & Pritchett / Chaziru Sample No: 7-MW4-GW4
Sample Start: (Date) 5/13/96 (Time) 17/5 Sample End: (Date) 5/13/96 (Time) 1731
Background PID Reading: D ppn PID Reading: 33 ppn
Depth to Water (BTOC): 58.62'
Screen Interval: 42'-62' BLS
Sampling method: Bailor 2"
Sampling Equipment:
Sampling Equipment Decontamination method:
- new disposable bailer
Weather: Cloudy, 50%, N-NW winds, 15-20 mph
Lab Analyses:  (including preservatives and filtering if applicable)  VOLS (CLP) (4) 40-nl VOA Hel  SVOCS (CLP) (2) 1-l amber  TPH (8015) GRD (2) 40-nl VSA Hel  DRG (1) 1-l amber  DRG (1) 1-l amber  QA/QC Samples: Mother (CLP) (1) 1-l Poly HNO3 - unfiltered and filtered  (0.45 pm)
Comments: (including depth of pump if used for sampling)  Produces selt moderate producer;

Time	Temperature (°C)	рН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks
1731	14.5	7.66	836	7999	Cloudy
		12/	7		7
		X			

Cont Falls 2 hours
Installation: MANG - Great Falls Well No. 7-MW5  Client/Project: HA 7 WRAP/ Great Falls Site: 7
Client/Project: HA ZWRAP/Creet Fallo Site: 7
Complet Day last a Volk At Met his ragample No: 7-17 100 3
Sample Start: (Date) \$/12/4/ (Time) //6/5 Sample End. (Date) 3/15/10 (Time) /6 (Time)
Background PID Reading: Oppn PID Reading: Oppn
Depth to Water (BTOC): 54,6311
Screen Interval: 43'-63'8LS
Sampling method: Builar 2"
Sampling Equipment:
Sampling Equipment Decontamination method:
- neur disposable bailer
The displace of the second of
Weather: Cloudy, 506, N-NW winks, 15-20 mph
Lab Analyses:
(including preservatives and filtering if applicable)
(including preservatives and filtering if applicable)  VOLS (CLP) (4) 40-ml VOA  SUKS (CLP) (2) 1-l amber  TPH (805) GRO (1) 40-ml VOA HCL  DRO (1) 1-l imber
TOH (8N5) GRO (2) Yo-Me WA HER
QA/QC Samples: metals (CLP) () (-l. Poly HNO3 - entired
ONOC Samples: metals ((LP) 1) (-l. Poly HNO3 - enfectives
QA/QC Samples: Metals (CP) (1) (-E 1 seg 11.
(0,4541)
as it is found to
•

1641   5.1 7.68 859   131 clear	Time	Temperature (°C)	pН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks Olifity clary -
	1641	15.1	7.68	859	131	•
		1	, h	<b>X</b>		

Comments:

(including depth of pump if used for sampling)

slow producer - but clear!

MANG-Great Falls J-mart
Installation: MANG-Great Falls ANG-Well No. 9-mwl
Client/Project: 4A241940 / Casest Falls Site: 8
Sampled By: R. U. Bitlatt Inne B Sample No: 8-MW/-GW/
Sample Start: (Date) 5/15/96 (Time) 6/4 12 Sample End: (Date) 5/15/96 (Time) 1345
Background PID Reading: O pon PID Reading: O pon
Depth to Water (BTOC): 52,44/
Screen Interval:
Sampling method: Bailer 2"
Sampling Equipment:
Sampling Equipment Decontamination method:
- new disposable bailer
new deficient
Weather: Clark #
Lab Analyses:
(including preservatives and filtering if applicable)  VOCs (CLP) (4) 40-ml VOA HCL  5 VOCs (CLP) (2) 40-ml VOA HCL  TPH (8015) GRO (2) 40-ml VOA HCL
QA/QC Samples:  DRO (1) 1-l imber  Metale (CLP) (1) 1-l Poly HNO3-each unfiltered  and fittered sample

Time	Temperature (°C)	рН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks
1345 -	15.5	7,73	811	638	dightly Cloudy
			A		
				7	

MANY - Great Falls a mis
Installation: MANG - Great Falls Well No. 8-mw2
Client Maniput: It A 2 (1) KAP   BACT   Site: X
Sampled By: Kathern Pertilett/Moe Cheerer Sample No: 8-MW 2-601
Sample Start: (Date) 5/14/46 (Time) - Sample End: (Date) 5/14/96 (Time) /358
Background PID Reading: Depm PID Reading: L.D. ppm
Depth to Water (BTOC): 55!/7
Screen Interval: 99-69'BU
Sampling method: Bailer 2"
Sampling Equipment:
Sampling Equipment Decontamination method:
- new disposable build
Weather:  Surrny, 50'0, winds 20-75 mph N-NW  Lab Analyses:  (including preservatives and Altering if applicable).
SVOCS (CLP) (4) 40-ml VOA Hel SVOCS (CLP) (4) 40-ml VOA Hel TPH (8015) GRO (2) 40-ml VOA Hel DRO (1) 1-l amber QA/QC Samples: Motella (CLP) (1) 1-l Pdy HNO3 - each unfeltered God fettered (0.45 pm)
(0.45 pm)

Comments:

Time	Temperature (°C)	рН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks
1358	14,8	7,82	938	63	Oear
		ist	2		
		74			

Installation: MANG - Great Falls  Installation: MANG - Great Falls  ANG Well No 8-mwl \$ 8-mw3
Installation: WANG - GREAT FAW Well No 8 - MW 3 - MW 3
Client/Project: HAZWRAP GARAT Site: 8
Sampled By: Kuthayn Pritchett/ Chazizadeh Sample No: 8-1165 60 8-1165
Sample Start: (Date) 15/96 (Time) 13/5/8 ample End: (Date) (Time)
Background PID Reading: Oppm1415 PID Reading: 2.8 ppm
Depth to Water (BTOC): 5/,26
Screen Interval: 37-57' BLs,
Sampling method: Bailer 2"
Sampling Equipment:
Sampling Equipment Decontamination method:
- rew disposable builer
Weather: Clary, 506, windy
Lab Analyses:
(including preservatives and filtering if applicable)  VUC 5 (CLP) (4) 46 ml VOA HCL
5VO(5 (CLP) (2) (-l'amber
TPH (805) GRO (2) 40-ml VOA Hel
metals (CLP) (1) 1-le Poly HNO3 - end infection
metals (CLP) (1) 1-le Poly HNO3 - each infiltered and fittered
(8,45 pm)

Comments:

Time	Temperature (°C)	pН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
1453	15,2	7,80	717	106	dishtly	clarky- clear
		1	*			

MANG - Great 8-mwy
Installation: Falk RI Well No. 8-MWY
Climat Project: UA 21 SPAP / GARAK FURSITE: 8
Sampled By: Viller Pethot Portained Sample No: 8 - Thuy - 601
Sample Start: (Date) 5/14/46 (Time) 1630. Sample End: (Date) 5/14/46 (Time) 1653
Background PID Reading: () ppm PID Reading: (), (6 ppm
Depth to Water (BTOC): 53, 68
Screen Interval: 40-60' BLS
Sampling method: Bailey, 2"
Sampling Equipment:
The season of th
- new defend
Weather: Clardy, rain, 506, N-HHP NW winds (15-20 mph)
Lab Analyses:
(including preservatives and filtering if applicable)  VOCs (CLP) (4) 45-ml VOA HCL  SVOCs (CLP) (2) 1-l amber  TRH CCV (TAIS) GRA (2) 45-ml VOA HCL
SVOCS (CLP) (2) 1-l amber TPH CCP (8015) GRO (2) Yo-Me VOA Hel  DRO (1) 1-l amber  OA/OC Samples: hold of (1) 1-l amber
177 CAOLO ONO CO TO
QA/QC Samples: metale (CLP) (1) 1-l Poly HNO3 - lack infiltered and fittered (0,45 pm)
method (CLF) (1) / se 1 bog in s
infetteed and fettered
(0,45,1,4)

Comments:

Time	Temperature (°C)	pН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks
1653	13,9	7.65	883	534	digitty cloudy
			KP		

	Site: Greatfalls, MT, Site No. 1
Installation: NANG	Site. 9/2/19/1/11
Client/Project: MANG	Well No: (-mw-)
Duran Chart: (Date) to Tiel (Time) 0800	Sample No: 1- mwi -6w2
Purge End: (Date) & J-126 (Time) 0 200	PID Reading: 0.0
Purged By: MG / DB	Background PID Reading: O.O.
C	Denth to bottom of screen:
Depth to top of screen:	Denth to Bottom of Well (BTOC): 57.82 PT
Depth to Water (BIOC). Size of Property (Control of the Control of	3) x (well diameter (inches)) x height of water column
Volume of Water in Well (gallons) = $(0.0406)$	) x (well diameter (mones)) it notes
(feet) $9.17 \times 0.163 = 0.679$	m/t
11.7 × 01.2	
Volume of Water in Well x $3 = 2.03 q_4$	
0.679 ×3 =	
• •	
Purge method: Bailor 2"	
Purge Water Containment: Poly Tank	(1,100 941)
Average Rate of Removal of Water:	
LNAPL/DNAPL Thickness:	Equipment for NAPL:
Weather: Jo's Sundy	
W Catrior.	
G	
Comments: purged Dry after	2.2 gallour @ 0850
	<i>y</i> ,

	Time	Volume of Water Removed (gallons)	Water Level ft BTOC	Depth of pump intake	Temp (°C)	pli	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks
Inital	0812		53.65	MA	13.7	7.83	<b>4</b> .63	32	Do=13.8
	U830	0,5			11.8	7.15	0.62	418	30= 14.8
	c837	0.3			11,2	7.22	0.61	602	Do= 1411
	0845	o . 3			111	373	0,62	807	120=13.8
<del>.</del>	6853	0,4			11.3	7.28	0.624	999	120= 13.9
-	0620		1220	Dex.					
5707			, , , , , ,						
				1	Λ <b>-</b> Λ				

	Site: 1 / Great Falls
Installation: In An G	0.10
	Well No: 1-mus
Client/Project: man C	Sample No: 1- mw2- 6w3
Purge Start: (Date) 8-196 (Time) 0910	
Purge End: (Date) 8 Jul 96 (Time) 10 00	Background PID Reading: 6.8
Durad Divi OB (MG	DACKELOUIIG T US TORRING.
Depth to top of screen: Yo' BLO	Depth to bottom of screen: 60' BL5
Deptir to tor or	Donth to Rottom of Well (BIUC).
Depth to Water (BIOC). 73.70	(well diameter (inches)) x height of water column
Volume of Water in Well (gallons) = $(0.0408)$	3) x (well diameter (inches)) x height of water column
(feet) $16,02 \times 0.163 = 1.66 \text{ gal}$	
Volume of Water in Well x 3 = $7.83$ gal	
Purge method: Balle 3"	0/ 50 /
Purge Water Containment: (, ( ob )	gol Pdy Tork
Average Rate of Removal of Water:	
LNAPL/DNAPL Thickness:	Equipment for NAPL:
Weather: 303 Sunny	

Comments:

Time	Volume of Water Removed (gallons)	Water Level ft BTOC	Depth of pump intake	Temp (°C)	pli	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks
0916	0,45	43,46	r.b	12.9	8.29	0.45	10	10= 13.4
	115			11.5		1,52	10	Po = 14.5
0933					7.06	), 1/182	78	िक= १४.५
0927				11.4		1,49	10	Ao= 13,1
0934	1.3			11.8			764	Do= 13.7
6941	2,8			10.5			513	Do = 15.4
0947	2.8		-	1			372	130 = 15.3
0955	2-6		<del></del>	10.7	<del>2.0.7</del>	11.38	~~3	
			1	19-		<del></del>		
			<u></u>	-				<u> </u>
					<del> </del>	<b></b>	<del> </del>	
				<u></u>				

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4 UTC

Installation: MANG	Site: 6 GREAT FAILS
Clima/Daniagt: mmm /	Well No: 6-ma1
Client/Project: MAN C Purge Start: (Date) 83-196 (Time) 1402	Sample No. 6- mwr-663
Purge Start: (Date) 835192 (Time) 1902	DID Passing to
Purge End: (Date) 850 36 (Time) 1445	PID Reading: 67
Purged By: M.C.	Background Pitz Reading 6.5
	Depth to bottom of screen:
TOON UI	Denth to Bottom of Well (BTOC): 64.74 FT
Depth to water (BTOC). Tares	x (well diameter (inches)) x height of water column
Volume of Water in Well (gallons) = $(0.0408)$	x (well diameter (inches)) x height of water column
(feet) $16.74' \times 6.163 = 2.7$	2916
Volume of Water in Well x 3 = 6.185 2.7295 x 3 = Purge method: Bailer 2'	
	/_
dize water Containment	C
Average Rate of Removal of Water:	
LNAPL/DNAPL Thickness:	Equipment for NAPL: —
W-4h 7 '- C	

Comments:

Time	Volume of Water Removed (gallons)	Water Level ft BTOC	Depth of pump intake	Temp (°C)	pii	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
1405	0,5	48.00		12.1	7.2	0.53	8	Do= 12.34 /clk	
1409	1, 0			1415	7.0	0.51	458	Do = 13,00/	Bee
1413	1.8			14.3	7.0	0,53	628	Do = 13.20	1
1417	1, 10			144	7.1	6.54	448	13.22/	tt
1421	(. 84 .			14.3	7.1	0,86	328	Do = 13,00 / 4	1 4
1426	1, 8			14.3	3.1	0,56	466	20= 12.70 c	il ea
1431	1. 3		•	14.3	7.1	0.57	244	Do= 12.40	"
1436	1, 8			14.2	7.7	0.58	358	Do= 12.2a	1,
1447	1.4			14.2	7.2	0.58	273	Do= 12.32	′(
-			Do						
			120						

Initial

570P

_	Site: 6 GREIT falls
Installation: MANG	Well No: 6-mw2
all imprison and and a	
= C + (Deta) C T (9/ (Time) \ 3 20	Outrible:
Purge End: (Date) 8 Jul 96 (Time) /3 To	FILE ICAGINE.
	Depth to bottom of screen: 61 BL5
Depth to top of screen.	Depth to Bottom of Well (BTOC): 61,38 FT
Depth to Water (B10C). 3 77 3 4 (0.040)	R) x (well diameter (inches)) x height of water column
Volume of Water in Well (gallons) = (0.0400	8) x (well diameter (inches)) x height of water column
(feet) $6.88' \times 6.163 = 1.12$	gels.
•	v
Volume of Water in Well x 3 = 3.36 gals	•
1.12 gub x3-	
Purge method: Radio 2"	
Purge Water Containment: Poly Tank	1/00 cm
Average Rate of Removal of Water:	
LNAPL/DNAPL Thickness:	Equipment for NAPL:
Weather: Tos Junny	
Comments: (Hc) owr	
Comments:	
@ Brownish gray murl	Ly Coloned .

Taital

S700

Time	Volume of Water Removed	Water Level ft BTOC	Depth of pump intake	Temp (°C)	pH	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks
1326	(gallons)	5415		14.7	71	0.56	18	(0/1)0=122
1333	1 ( 84			13.8	7.83	0.62	999+	Op Do= 13.7
1337	1,8			13,4	7-82	0.68	9997	© Do = N.29
1344	108			13,5	6.99	0.70	9994	Op Do = 14-20
<u> </u>				<u> </u>				
					M		<u> </u>	
				1			ļ	
				1				

Installation: 777-717 C	Site: 6 CREST Folls
Cli + Designation and A	Well No: 6-mw3
Purge Start: (Date) \$51.96 (Time) 1420	Sample No: 6-mw3-6w2
Purge End: (Date) 850126 (Time) 1605	PID Reading: 5.5
Purge End: (Date) \$ 5 0/32 (Time) 765-	Background PID Reading: 10.0 ppm
Purged By: h 6	Depth to bottom of screen: 60' BL5
Depth to top of screen: 40' BLS	Depth to Bottom of Well (BTOC): 60.42 FT
Depth to Water (BTOC): 5220 9 F1	Depth to Bottom of Well (BTOC): 60.42 FT
Volume of Water in Well (gallons) = (0.0408	x (well diameter (inches)) x height of water column
(feet) 8.38 × 0.163 = 254	. 1.34
Volume of Water in Well x 3 = 4.097	
Purge method: Bailer 2"	
Purge Water Containment: Poly Tarke	1,100 grl
Average Rate of Removal of Water:	
LNAPL/DNAPL Thickness:	Equipment for NAPL:
Weather: Jo's Summy	
OC Clark	

Comments:

til

	Time Exitu	Volume of Water Removed (gallons)	Water Level ft BTOC	Depth of pump intake	Temp (°C)	pH	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
1525	135	8.5	29.04	ſ	16,0	7,1	0.52	lo	Po= 11.4 Clea	
1294	1200	18.5			14.7	7.0	0,54	168	Do = 12,18	cloud
	1883	12.55		de/	14-8	7.1	0.56	999+	Do= 12.40	Cloude
	1334	0.5		17	14.7	7.1	0.58	999t	Do=12.73	clouds
1540	1340		·	7	14.9	7,1	0.60	733	Do = 12.50	cloudy
1244	13 4	0.5		7	15.8	7.2	e, 60	536	Do = 13.00	11
1549	1749	0.5			15.0	7. Q	0. 51	332	Po= 13.00	1/
1558	1758	0,5			15.3	7,2	0.62	506	Do = 13.70	
1600	' Conts	1915								
	_				n?				7	

			0		Site.	<b>7</b> -	Mary BB	GR E	AT falls	
	Installat	tion: MA	<u>n C</u>		Well ]	No.	7- mw	2		
	Client/F	roject: 717	7) C		Samo	le No	2 · m	ع - کے س	$\omega \chi$	
	Purge S	tart: (Date) \$	Jul 96 [11	me) 10"34	TITIE	eadin		30,0	pin	м
	Purge E	nd: (Date) %	30196 [11	me me	Poole	7701171	I PID Read	ing. O.B	199	m
		By: M (. /		9:0	Denti	to be	attom of sci	reen:	CJ 1872	
	Depth t	o top of screes o Water (BTC	n: 42	18 TT	Depti	to B	ottom of W	ell (BTO	C):62,58	FT
	Depth t	o Water (BTC	)C): 5 3 73	) - (0 040)	2) × (w	ell dia	meter (inch	es)) x he	ight of water col	lumn
	Volume	of Water in V	veli (gailons	s) = (0.0400	)	CII GIO	(	,,		
	(feet)	9,13	x 0.16=	s = 1.48	8 gals	-		•		
			1	146-18						
	Volume	of Water in V	Vell x 3 = 7	7.18 9/110						
$\mathcal{L}_{n}$	1,4	885145 7	_	. "						
	Purge n	nethod: Ba	110-1				,100 Cm	2 [		
	Purge V	Vater Contains		ly Toul		<u>`</u>	, ( <u> </u>			
	Average	e Rate of Rem	oval of Wal	ier:	Equip	ment	for NAPL:	/		
		DNAPL Thic			Equip	MICHE	101 1112 2.	, , , , , , , , , , , , , , , , , , ,		
	<u>Weathe</u>	r: 70's 5	U~~ Y							
	Comme	ents:	ا ماما	0	1 +	\	1 01 10	$\cap$	product noted	)
		0				(O)	SHEEN	or tree	Arodivel Rotte	
		@ Hychocan	Low ode	r steen	<b>X</b> C					
			1		T _	T	C	Clarity/	Remarks	
	Time	Volume of	Water Level ft BTOC	Depth of pump intake	Temp (°C)	pH	Conductivity (uS/cm)	Turbidity		
		Water Removed (gallons)	R BTOC.	panap maane					roll	$-\parallel$
1: 1	24		53,45		15.20	6.92	0,5%	120	130=11.80	(
In. tist	1034	6, 42	0.311					341	Do= 12.6	<u>- 1</u>
	1239	1.8			13'3	649	0.61	370		
	19-47	<b>4</b> , 5	Ì		13.4	7,00	d. 66	431	Do = 17 08	
	10-10-	4, 3			13,4	7.01	0.68	340	Do = 12,62	0
	10 46	0,5			1 2, 7	7-01			1	- 1
	1051	0,5			13,4	7.01	0.69	326	190= 15.22	
					12 4	7.01	0.73	279	100=12.7	
	1024	C.T			1			537	Do= 13.00	
	1057	0.5			13.3	1.03	6.74	727	100-13.00	<del> </del>

5700

0.5

1100

Installation: 7779716	Site: 9
7: 10 : M . M M A Z (2)(A)	Well No: 7- mw 4
C (Data) 6 7 1 64 (Time) (26 78	Sample No: 7-may-6w2
Purged By: m 6 / D3	Background PID Reading Q. Q. International Control of the Control
Torgetter - Secretary 18 R. 5	Depth to bottom of screen: 62' BLS
(DTOC) (C) 7 3	Depth to Bottom of Well (BTOC): 62. 44
Volume of Water in Well (gallons) = (0.0408	3) x (well diameter (inches)) x height of water column
(feet), 4.71 x 0.163 = 0.7	167 91/5

Volume of Water in Well x = 3 = 2.30 gals

Purge method: Baller	2"	
Purge Water Containment:	P3(x	Tank 1,100 gal
Average Rate of Removal of	Water:	
LNAPL/DNAPL Thickness:		Equipment for NAPL:
Weather:	0.	70°-80°
		•

Comments: & strong Hydrocus bus odor emerting from well.

(3) Sheen on unter

			(2)						ก
Time	Volume of Water Removed (galions)	Water Level ft BTOC	Depth of pump intake	Temp (°C)	pH	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
09.53	0.5	57.73	11,48	15.2	7.(	0.55	2	Clas (2) (3)	
0958	0.5		12.38	13.9	7.0	0.56	9994	cloudy, Brown	3
005	6.2		12.4	13.6	7. X	0.59	999+	11 11(0)	
1008	0.5		12.6	13.5		0.68	999+	11 170	(S) 45
1012	0,5		12.8	13.6	6.9	0,63	999t	1. 21	D) (§
								>	
				1	-3				
				0.1	m	200			

5704

<b>^</b>	Site:	7	Coreat	Falls	
Installation: mnn nc	Well N	Jo:		mw 3	
ati in a single man man man				3-60	3 ي
5 - + (Deta) 6 = 16( (1me) 1/00	Sampl	<u>e 190.</u>		<u> </u>	nam
Purge End: (Date) 9 July (Time) 1/37				ing: ^	o. E olm
					51 BL5 ppm 1
	Depth	to bo	ttom of scr	een:	The state of the s
DCD(II to to)	<b>T</b>	A- U	SHOM OT W	eurnii	
Depth to Water (BTOC): 50.03 FT Volume of Water in Well (gallons) = (0.0408)	3) x (we	ell dia	meter (inch	es)) x he	ignt of water column
(feet) $(0.163 \text{ gals}) \times ($				•	
The state of the s					
Volume of Water in Well x 3 =  Purge method: \( \beta \lambda					
Pulge memod.	TAN	اح			
Pulge Water Containment					
Average Rate of Removal of Water:	Equip	ment	for NAPL:		
LNAPL/DNAPL Thickness:	Equip	HICHE			
Weather:					
Comments: O sheen to surface 6.5 galo por	(slig	, h+'	)		. •
- P - P	<i>y</i>				
Do					
Time Volume of Water Level Depth of	Temp	pli	Conductivity	Clarity/	Remarks

Volume of

Time

Depth of pump intake (uS/cm) (°C) A BTOC Water Removed (gallons) 14.3 8.0 clase 50.03 Ø.66 0.0 13.8 Brown Cloudy 224 13. 9 72 0.88 8.5 1128 11 20 468 078 12.8 7.2 15.00 2.0 u 624 1.77 16 12.2 7.2 15.4 2.5 1114 1, 751 12.8 7.2 16.8 1. 8 1118 376 12.17.2 Q. 74 15.6 1. 8 1122 1, 354 7.2 Q.72 15.8 12.1 1. 2 1123 D. 71 296 11.9 1133 1.0

Turbidity

570P

· · · · · · · · · · · · · · · · · · ·	Site: 7 CRENT fellor
Installation: MAMC	Well No: 7-mws
Client/Project: 777 77 77 C	Sample No: 7. mws-6w2
Purge Start: (Date) & 201 94 (Time) 1111	
Purge End: (Date) 8 Jul 96 (Time) 1200	FID Reading.
D 1 D 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Background PID Reading
- 15/ 14/ 5	Depth to bottom of screen: 63 BL5
Depth to top of CREOCY C3 14 CT	Denth to Bottom of Well (BTOC): 63,35 PT
Depth to Water (B100): $\frac{1}{2}$	3) x (well diameter (inches)) x height of water column
(feet) $10.21 \times 0.163 = 1.66 \text{ gc}$	l <sub>r</sub>
10:01 × 01:02	·
Volume of Water in Well x 3 = 4.49 g.1	
1.66 gelt ×3-	
1.66 gelv X3-	
Purge method: Baller 2"	
Purge Water Containment: Poly Tow	k
Average Rate of Removal of Water:	
LNAPL/DNAPL Thickness:	Equipment for NAPL:
Weather: 70's Sway	
U Slight Hydrocuben (1	tc) oder,
Comments: @ graysh Brown when	•

Tuitial

570P

Time	Volume of Water Removed (gallons)	Water Level ft BTOC	Depth of pump intake	Temp (°C)	ρĦ	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
1197	0,48	53.14	1	14.7	7.06	0.730	180	120=12,7	Φ a t-
1126	6.45			13.7	7.1	,577	999+	Po= 13,4	06
1130	0,45		1	135	7.1	0.600	999+		OKE
1134	0.75			13.5	7.1	0,690	999+	Do = 1411	
1138	0.75		-	13.6	7.1	0.660	9991		
11 45	0.5			13,5	7.1	0.69a	999+	100= 19.20	0/00
11 52	0,5			/3.3	7.1	0.715	799	100 - 11.00	(i)/(2)
1157	1, 10			13,8	7.1	0.725	999+	Do = 1421	0/3
				2					

			WELL	PURG	ЩG.	LUG		•
Client/P Purge S Purge E Purged Depth t	tion: 711 7 Project: 711 7 Start: (Date) 9 End: (Date) 5 By: 111 6 to top of screen to Water (BTO)	7 17 6 7 11 96 (Ti 5 J 1 96 (Ti	me) 0832 me) 0900 86 pt s) = (0.0408	Site: Well I Sample PID R Backs Depth Depth 3) x (we	No: le No: Readinground to bo	E RI E - mu ig: id PID Read ottom of scr	ing: Some	1. 8 ppn
Volume of Water in Well x 3 = 2.949 ls  O.481 × 3 = 2.949 ls  Purge method:  Purge Water Containment:  Average Rate of Removal of Water:						(00)		
INAPI	JONAPL Thic	kness:				for NAPL:	/	
Weathe		برر ک	wy w	rindx		80°5		
Comments: Pursed Day @ 20 gal removed Do								
Time	Volume of Water Removed	Water Level ft BTOC	Depth of pump intake	Temp (°C)	pli	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks
<b> </b>	(gallons)	c) '0/	9.7	1514	21	0-66	9	Class
0840	\$.5	52-86				0.68	9997	,
0845	(4,5		11.10	14.5	7.2	0.66		

Andal

5700

			Do					
Time	Volume of Water Removed (gallons)	Water Level ft BTOC	Depth of pump intake	Temp (°C)	pli	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks
0840	d.5	52-86	9.7	1514	7.1	0.66	9	Clare
0845	(p, 5		11.10	14.5	7.2	0.68	999+	
0848	0,5		10,13	14.2	7.2	0.68	895+	12 17
0851	0.5		11.20	14.1	7.3	6,68	999+	1,
			Vu	-				
<b> </b>								
-								
					<u> </u>	<u></u>		

- m: An mm/	Site: 8 GREAT FALLS
Installation: MANG	Well No: 8-mw2
Client/Project: MANG	Comple No. 0- mwh- 642
Purge Start: (Date) & 501 96 (Time) 1628	Sample No. 8 Mars De M
Purge End: (Date) & Jol46 (Time) 170 &	PID Reading.
	Background FID Reading. S. C.
- YY' KI C	Depth to bottom of screen: 64' BLs
Depth to top 0. 45 F.	Denth to Bottom of Well (BTOC): 64.4% FT
Depth to Water (B100), $31/3$	x (well diameter (inches)) x height of water column
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
(feet) 12.84 x 8.163 = 2.89 s	Al-
Volume of Water in Well x 3 = 4, 2 7 &  Q. Q. g. s. y 3 =  Purge method: Bailer  Purge Water Containment: Poly Table  Average Rate of Removal of Water:  LNAPL/DNAPL Thickness:	Equipment for NAPL:
LNAPL/DINAPL THICKNESS.	
Weather: Fo 's Sunny	
Comments: Cloudy , Drown 1:	Lugar,

Tritial

Time	Volume of Water Removed (gallons)	Water Level ft BTOC	Depth of pump intake	Temp (°C)	pH	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	705/L
1630	0.5	51.54		15.0	7.2	0.78	543	Cloudy	A = 12.5A
1635	0,5			14.8		Ø.73	999+	11 Brown	12.40
	0.5				7.2	6.71	959+	1, /11	12.48
1639	0.5			13,8		6.73	999+	1, 1 1,	12.50
1644	0.5	·		13.5			736	4 4	12.82
1651	1, 8				7.2	4.75	746	11 / 11	13.00
1654	0.5		.•	13,5	7.2		999+	1, / 1, -	13.80
1700	1.78			13.9	72	8.74	9997	1. / 1,	12.94
1704	1.80			13.7	7.2	0.74	999+	"/ 1/	13.48
17									
			1 de	3					

504

4.4.4.4	Site: & GREAT FAILS
Installation: AN AN C	Well No: 8-mw-3
Client/Project: 47 77 6  Purge Start: (Date) & 51 96 (Time) 1708	well No. 8- mu3- 6w 2
5 (Data) 0 = (c/ (Time) 1738	Sample No. 8- Mass
Purged By: W. D8	Background PID Reading: 8. 8
Purped By. 37' BLT	Depth to bottom of screen: \$7' BLS  Depth to Bottom of Well (BTOC): \$7.3% FT
Depth to top of screen.	Depth to Bottom of Well (BTOC): \$7.3% FT
Depth to Water (BTOC). \$1,000	8) x (well diameter (inches)) x height of water column
Volume of Water in Well (gallons) = (0.0408	o) x (won diameter ( // // // // // // // // // // // // /
(feet) 6. $8^{1} \times 0.163 = 0.978$	8 gm/s.
Volume of Water in Well x 3 = 2, 934 21  No. 978 505 X 2  Purge method: Railer 3'  Purge Water Containment: Poly Tank  Average Rate of Removal of Water:  LNAPL/DNAPL Thickness:	
Weather: 70's Sunny	
Comments: 1). (2 > > - (-	

Comments: Dry @ 2.75 galo

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. <i>J</i> Y	$\boldsymbol{\omega}$

									ميم آا
Time	Volume of Water Removed	Water Level ft BTOC	Depth of pump intake	Temp (°C)	pH	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	<u>Do</u>
	(gallons)	51.30		15.3	2.1	0,51	10	clear	12.1
726	<b>K.</b> 5	31.30							13.
718	8.5			13.8	7.8	Q 23	444	cloudy	13.
731	4.5			r3. g	7.0	6.23	839	cloudy	ll .
				13.9	7.0	8.54	654	cloudy	13.7
735	6.5				T		28	Class	19.
740	6.2 .		ļ	13.9	7.8	0.54	133	CCA2	
				<u> </u>					
				1	1	_			1
				d k					
	ļ	<u> </u>	1-9	7	-		<del> </del>		1
							<u> </u>		1
				+	+				
		1			1				H
	1	l				<del></del>	<del></del>		2

	Site: 6 Great Fatos
Installation: MAnc	<del></del>
Client/Project: MANG	
Pursa Start: (Date) 4 5 1 96 (Time) 0700	Gainbie 1 to
Purge End: (Date) 90 yl 96 (Time) 0938	PID Reading.
- 10 m C	Background PID Reading
Purged By: MG DD  Depth to top of screen: CO' BCS	Depth to bottom of screen: 60 BLS + 10 BLS
Depth to top of screen: PCS	
Depth to Water (BTOC): 53.74 FT	Depth to Bottom of Well (BTOC): 60 443 Fr
Volume of Water in Well (gallons) = (0.040)	8) x (well diameter (inches)) x height of water column
(f-at)	1 406 /
(feet) $6.62 \times 6.103$	3= 1.088 pls
Volume of Water in Well x 3 =  1,088 ×3 = 3,366 gils	D'' Bailer
Purge method:	
Purge Water Containment:	Py Tank ( 100gm
Average Rate of Removal of Water:	
LNAPL/DNAPL Thickness:	Equipment for NAPL:
	Windy
Weather: Surry warm	

Comments:

Domle

Time	Volume of Water Removed (gallons)	Water Level ft BTOC	Depith of pump intake	Temp (°C)	ρĦ	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks
8918	4.5	23. J.W	11,3	144	7. æ	8.62	10	Clear
4512	k. 5		11.7	13.6 13.6	7.1	e.66	664	Cloudy Gray
5414	8.5		11,7	13.7	7.1	0.68	743	l ( Lc
0918	8.5		11.7		7.1	€.7c	777	Li ke
₹9.00 g	r,5 ·		11.7	13.5	7.0	Q. 7c	564	Le L,
0925			!1,7	13.6	7.1	0.71	382	Cleve
0930			11,7	13.8	7.1	6.71	383	Clere
				-	3		>	
				-				

In that

5100

	Well No. 1-nw2 &
Installation: mn n n C	Site:   GREAT FALLS
Client/Project: m na n c	Sample No: 1- mw2 - 6w3
Sampled By: DB/m6	- 1 (Data) - 1 (1me) 17 (5
Sample Start: (Date) 9 Jul 96 (Time) 1310-	
Background PID Reading: & & pan	PID Reading: Yo X part
Depth to Water (BTOC): 43.46	
Screen Interval: 4-60	BL
Sampling method: Beiler 3"	
Sampling Equipment: Rayler 2"	
Sampling Equipment Decontamination meth	od:
None Disposable	
Name Distersion	
Weather: 703 Sunay	
Lab Analyses:  (including preservatives and filtering if appli  VOCS 10/95 clP - IACL SUDO  TPH - Ceo - 6015 - HCL  TPH - DRD - 1000C  MY + 16 3/90 clP - 14003 C F. I toul  QA/QC Samples:	= 390 CLA - NorL
Neve for smoker	
T13- A	
TEMP Bluk	
Comments: (including depth of pump if used for sampling	ng)
Clar	

Time	Temperature	рН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks Do	
1320	15.8	7.2	[ \ \/ bs	G. 0	13,4	clear
,			MG			
						<u> </u>

· · · · · · · · · · · · · · · · · · ·	Well No. 1- mwl
Installation: mm n t	Site: 1 GREAT FALLS
Client/Project: MANG	Sample No: 1- mw1- 6w1
Sampled By: B MC	Sample Fnd: (Date) (Date) (Time) 1,000
Sample Start: (Date) 113112 (Time) 09 50.	Sample End: (Date) (Over (Time) 1000
Background PID Reading: 0 0 9/-	PID Reading: 6.0 per
Depth to Water (BTOC): 55. 83	
Screen Interval:	
Sampling method: 2" Backe	
Sampling Equipment:	_ J.
Sampling Equipment Decontamination meth	0 <b>0:</b> ·
Nove 1)	-spo sn
Weather: Suny warm winds	
Lab Analyses:  (including preservatives and filtering if applic  (including preservatives and fi	cable) netelr. 3/40 CP - HNU3 (Filtred furtilled
QA/QC Samples:	
TRIP Black	
Tamp Blank.	
Comments:  (including depth of pump if used for sampling well purged Dry. (before under	g) - regurement ( Belw) could be taken)

Time	Temperature (°C)	рН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks
	Purgel		5ry		

Well No. 6- mw l
Installation. 171 Prince Six Conference Conf
Client/Project: MANG Site: Sample No: 6-mw1-6w3
Sampled By: DB / mc Sample No. 6 Sample No.
Santi (Date) (Date) (Time) 1906 - Sample Line. (Date) (1905)
Sample Start. (Date) 10 to 10
Background PID Reading.
Depth to Water (BTOC): リン・ダム
Screen Interval:
Sampling method: 3 1 Daily
Sampling Equipment: 2" Karler
Sampling Equipment Decontamination method:

Disposal

Weather: Cloudy 703

Lab Analyses:

(including preservatives and filtering if applicable)

roc W/92 CLA- Hel

3/90 CLP- NUNC SUUC

Metals (Total, Dissolved) 3/40 CLA - HNO3 QA/QC Samples:

TPH-GRO- HCL TPIT- DRU- MONC

TEMP Blank

TRIP Black

Comments:

(including depth of pump if used for sampling)

fair - Poor Preducer.

Time	Temperature (oC)	рН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
0915	152	7.5	0.49	42	11.3	Chu
97.0			MG			

Well No. Installation: MANG Site: Client/Project: mn n n 6 - mw 2 ·6w2 Sample No: 6 Sampled By: DB/m6 Sample End: (Date) La Jolge (Time) 0900 Sample Start: (Date) world (Time) ogo-. Background PID Reading: 1800 & PID Reading: Depth to Water (BTOC): BL5 Screen Interval: 2" Sampling method: Sampling Equipment:

Sampling Equipment Decontamination method:

Disposal only

Weather: cloudy usen 703

Lab Analyses:

(including preservatives and filtering if applicable)

Succes 3/40 CLP - Hel Succes 3/40 CLP - Nore Metals (Total, Dissolved) 3/40 CLP - Haves QA/QC Samples: TPH-GRO- IKL TPH-DRO-NONE

TEMP BLANK. TRIP Blank

Comments:

Time	Temperature (°C)	pН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
0815	15,4	7.(	0.73	79	(0.3	Cen
			M			

	Well No. 6- mu3
Installation: MANG	VY CIT 110.
Client/Project: MANE	Sample No: 6-mw3-6w2
Sampled By: DB mc	The state of the s
Sample Start: (Date) Los 186 (Time) 1000.	
Background PID Reading: C. D fee	PID Reading: 0.0 pm
Depth to Water (BTOC): 5 5.18	
Screen Interval: 4-60' BL5	
Sampling method: Back 3"	
Sampling Equipment	
Sampling Equipment Decontamination meth	od:
None	Disposit
Weather: Suncy when windy	
Lab Analyses:	cable)
(including preservatives and filtering if appli	
	TPH (Gro) BOIS-HCC
Succ 3/90 CLA- home	TPH (DRO) BOIT- NONE
metals 3/10 LL7- HNU3	
QA/QC Samples:	
Duplicate (6- mw3A-GWZ)	
Trip Blank .	
TEMP Blank	,
Comments: (including depth of pump if used for sampling)	ng)

(T/D)

Time	Temperature (°C)	pН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
1000	15.7	7.5	0.60	0-0	11.6	clear
			19	67		

Installation: MANG	Well No. 7- MW I DOW I
	Site: 7 GREST Falls
Client/Project: 7nnn6	
Sampled By: De Im C	Sample No: 7- mw2- 6w2
Sample Start: (Date) 9 70/9/ (Time) 14 28	s. Sample End: (Date) 930196 (Time) 1455
Background PID Reading: O & per	PID Reading: 131.8
Background PID Reading. Or & pro-	
Depth to Water (BTOC): <3.38	
Screen Interval: 42'-63' BC5	
Sampling method: Bailing	
Sampling Equipment: 3 A. (c-	
C E December me	thad:

Sampling Equipment Decontamination method:

Lab Analyses:

(including preservatives and filtering if applicable)

#### Comments:

Time	Temperature (°C)	рН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
1420	17-8	7.4	O.C&	50	14.9	clase
				<u>a</u>		

	Well No. 7- mw3
Installation: manc	- /) <i>-</i> ( ///
Client/Project: mn n 6	Site: 7 (Frat Fall) Sample No: 7-mw3- 6w3
Sampled Rv. 1/8 mG	
Sample Start: (Date) 11 JATO (Time) 1050 -	
Background PID Reading: 3. 2 pear	PID Reading: 0-0
Depth to Water (BTOC): 50.03	
Screen Interval: 45'-65' BL5	21/ 9 /
Sampling method:	2" Baler
Campling Equipment	-1.
Sampling Equipment Decontamination method	<b>50</b> .
N/A Disposato of	baile.
f .	
Weather: Sund winds were	
•	
Lab Analyses:	rahle)
(including preservatives and intering it applied	GRO- HCL
(including preservatives and filtering if applications)  Voc 10/92 CLP - bec 794	out Des- none
	3/40 CIA (Total, dissifued)
netally netally	1/90 CIF (10th) dissilved)
QA/QC Samples:	
TO 0 71 /	
TRIP Blank	
Time Blank	
·	
Comments:	•
(including depth of pump if used for samplir	g) .
•	

Time	Temperature (°C)	рН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks Do mla	
0760	14.2	7.3	<u> </u>	6,0	14.00	clean
			me		<u> </u>	
			1 7 09			

Well No. $7-1009$
Installation.
Client/Project: 777 17 17 18 Complex No. 12 May No. (1)
Sampled By: DB / M 5 Sample No. 4-140 (Time) 0920
Sample By: Dis / MG  Sample Start: (Date) 113-124 (Time) 0900 Sample End: (Date) 413-194 (Time) 0900  PID Pending: 99 5 000
Background PID Reading: 6.0 PID Reading: 81. 8 p.
Depth to Water (BTOC): 56.35
Screen Interval: 45'- 65' BLS
Sampling method: 211 Baile
Sampling Equipment:
Sampling Equipment Decontamination method:
NA Disposal of back
Weather: Sun my warm, windy
Lab Analyses:  (including preservatives and filtering if applicable)  VOC 10/92 CIP - HCC TPH-8015- DRO - NONE  Svoc 3/90 CLP - NONE Metals 3/90 CLP - HNO3 (70tal, Dissolval)
QA/QC Samples:
Trip Blank
Temp Blank
Comments: (including depth of pump if used for sampling)
5, Rong Hydro carbon Olor

Time	Temperature (°C)	pН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
6900	13.3	7.5	o. 70	153	123	
			me			

# (Sold)

#### OPERATIONAL TECHNOLOGIES WELL SAMPLING LOG

	Well No. 7-mo5-6w2
Installation: mmmmf	
Client/Project: mn 71 71 6	Site: 7 GREAT Fills Sample No: 7-mws-6w2
Sampled By: Da /m 6	Sample Fnd: (Date) 5.2/15/ (Time) 1/6 2/8
Sample Start: (Date) 95.146 (Time) 1520	Sample End: (Date) 930196 (Time) 16 28  PID Reading: 1, 7 pp.
Background PID Reading: 6, 8	PID Reading. 17 6500
Depth to Water (BTOC): 53,53	
Screen Interval: 43' - 63' BLS	
Sampling method: Railer 2"	
Sampling Equipment: Rader 2"	.1.
Sampling Equipment Decontamination metho	<b>DQ.</b>
Disposal	·
Weather: 70's Survey	
Lab Analyses: (including preservatives and filtering if applic	cable)
vocs 19/92 CLZ HCL	TAH- DRO -
TPH GRO HCL	mitalo - ANO3.
Succes 3/40CLP -	776 (000
QA/QC Samples:	<u>-</u>
MONE for Samples-	
$\mathcal{T}_{\mathcal{B}^{-}}\mathcal{B}$ .	
TEmm Black	
Comments: (including depth of pump if used for sampling	g)

Time	Temperature (oC)	рН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
1600	19.8	7.2	0.61	6. s	13.69	o lese
			Ne			
			776			

Installation: MAME	Well No. 8- mw 1
Installation: 11117116	A
Client/Project: 777#71 6	
	Sample No: 8-mw1 - Gw2
Sample Start: (Date) 107019, (Time) 1445	Sample End: (Date) world (Time) 1445
Dample Start. (Date) (535.4	PID Reading: 1.8 acm
Background PID Reading: 6.0 pm	
Depth to Water (BTOC): 52.36	
Screen Interval:	
Sampling method: Bailer 2"	1
Sampling Equipment:	
Description met	had:

Sampling Equipment Decontamination method:

Dixin

Weather: Sumy, windy , usem

Lab Analyses:

(including preservatives and filtering if applicable)

QA/QC Samples:

Comments:

Time	Temperature (°C)	pН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
15-45	18.7	7.7	0.69	0.0	D.9	clar
			/	76		

8- mwlA-6w2 (Duplique)

	Well No. 6-mw 2 -6w2
Installation: mane	CLEAT Falls
Client/Project: man6	Sample No: 8-mu2-6u2/8-mu24-6w2
Sampled By: DB /mi	Sample No. (Date) 1071 2 (Time) 2440
Sample Start: (Date) to N/96 (Time) 1840	Sample End: (Date) 10 31 24 (Time) 24 40  PID Reading: 3.4
Background PID Reading:	PID Reading: 7.6
Depth to Water (BTOC): \$1,49	
Screen Interval:	
Sampling method: Bailer 211	
Sampling Equipment: Raylor 2	
Sampling Equipment Decontamination meth	oa:
Disposal	
Weather: Cloudy warm 703	
Lab Analyses:  (including preservatives and filtering if applied VOC 10/92 CLP - HCL  SUCCS 3/90 CLP - NOTE  Metalr (70tol, Dissolved) 3/90 CLP - QA/QC Samples:	TPH- DRU- NONC
TEMP Blade TB	
- · · · · · · · · · · · · · · · · · · ·	:
Comments: (including depth of pump if used for sampling)	ng)
Duplicate sayle take here	

Time	Temperature (°C)	pН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	,
13 25	17.5	2.7	0.96	00	13.9	Clear
			7	76		

Totallation man	Well No. 8-mu3
Installation: MANC	Site: 8 GREAT Falls
Client/Project: MANG	Sample No: 8- mis 3- 6w2
Sampled By: 33/m6	Sample Find: (Date) (4) 7.494 (Time) 14 45
Sample Start: (Date) 1030196 (Time) 1490.	Sample End: (Date) WJ186(Time) 14 45
Background PID Reading: Dage 1	PID Reading: 1.8 pp.
Depth to Water (BTOC): 52.28	
Screen Interval: 37'-57' BCS	
Sampling method: "Beile	
Sampling Equipment:	
Sampling Equipment Decontamination meth	od:
Distoral	
Weather: Sunny mild	
Lab Analyses: (including preservatives and filtering if applic	cable)
VOC CLA 10/90 - HCC	TPH - 8015 - 6RD - HCC
Succ CLP 3/90 - Nore	metale - 3/20 CLA - TOTAT HAUS
QA/QC Samples:	
TEMP Black	•
Trip Blank (wec)	

#### Comments:

Time	Temperature (°C)	pН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
1-145	18.3	7.6	22,0	0.8	12.1	clem
			P	G		

mm	Well No. 6-1	nω4
Installation: MANG	Site: 8	Great Falls
Client/Project: MANB	Sample No: 8	must find
Sampled By: DD /mc	Sample No: 6	-mw4 60 I
Sampled By. Q22 //	me) മൂം Sample End: (I	Date) 11 1/96 (Time) 0835
Sample Start: (2 11)	DYD D dimen	9.8 000
	- Vr. /	1.0 //
Depth to Water (BTOC): 53.	75	
Screen Interval: 40'-	601 BLT	
Sampling method:	<u>7 "6</u>	a 1 cm
Sampling Equipment:		

Sampling Equipment Decontamination method:

Disposal

Weather: Sury, mild, wind.

Lab Analyses:

metals 3/40 CL7 Dissolved - Hore3 (including preservatives and filtering if applicable) VOC - 10/42 ELP-HCL

Surce - 3/20 CL7 - NONE TAH- 8015 - 600 - HCL Dro - NOTE

QA/QC Samples:

TRIP Black - VCC

TEMPIBLANK.

Comments:

Time	Temperature (°C)	pН	Conductivity (uS/cm)	Clarity/ Turbidity	Remarks	
0805	13,7	7,6	17.0	10 B	12.8	cleve
-			/	Ja		
				167		

# APPENDIX D QA/QC DISCUSSION

## APPENDIX D DATA QUALITY ASSESSMENT

#### 1.0 INTRODUCTION

Chemical data are fundamental to understanding contamination and its impact on human health and the environment. These data support decisions regarding the need for remedial action and influence the selection of remedial alternatives. Data regarding contaminant concentrations in the environment contain uncertainties resulting from both variability and error.

The purpose of this appendix is to evaluate the chemical data collected during the Remedial Investigation (RI) at the Montana Air National Guard, Great Falls, Montana, and to assess the ability of the data to meet the project specific data quality objectives (DQOs) identified in the project Work Plan (WP). The data quality assessment (DQA) methodology presented in this appendix includes a discussion of validation of the data, and a review of data accuracy, precision, representativeness, completeness, and comparability. Validated chemical data are presented in Appendix E.

#### 2.0 DATA QUALITY OBJECTIVES

The purpose of the RI was to determine the nature and extent of contamination from known and/or suspected chemicals of concern at four Installation Restoration Program (IRP) sites. The sampling effort consisted of two rounds of groundwater sampling conducted in May and July 1996; and surface and subsurface soil sampling at each of the four sites. Data Quality Objectives (DQOs) for the RI are discussed in Section 3 of Appendix B (Quality Assurance Project Plan) of the RI WP.

All chemical data for this project were generated as definitive level data with abbreviated laboratory data package deliverables (HAZWRAP Level C deliverables). Due to problems with the operation of the field gas chromatograph, screening level data were not generated for this project as proposed in the RI WP. Samples proposed for quick turn-around field screening analysis of volatile organic compounds were analyzed by the fixed-base laboratory with results provided within 48 hours.

#### 3.0 ANALYTICAL PROGRAM

#### 3.1 Analytical Methods

Soil and groundwater samples were analyzed according to analytical methods specified in the WP. Analysis of volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs) were performed in accordance with USEPA Contract Laboratory Program Statement of Work for Organic Analysis (OLM01.8) and USEPA Contract Laboratory Program Statement of Work for Low Concentration Water for Organics Analysis (OLC02.0). The target compound list specified in OLM01.8 was reported for VOCs in soil, and SVOCs in soil and water. The target compound list specified in OLC02.0 was reported for VOCs in water.

The priority pollutant metals, plus barium, were analyzed according to *USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis (ILM03.0)*. Groundwater samples were analyzed for total and dissolved metals. Analysis of total petroleum hydrocarbons (TPH), including gasoline, diesel, oil, and JP-4 fractions, were performed according to SW-846 Method 8015

(modified). Purge and trap sample preparation (Method SW-5030) was used for gasoline-range TPH, and extractable TPH fractions were prepared using Method SW-3550 for soils and SW-3520 for waters.

#### 3.2 Analytical Laboratory and Reporting Requirements

All samples for this investigation were submitted to Laucks Testing Laboratories, Inc., in Seattle, Washington for analysis. Laucks is a HAZWRAP-recommended laboratory that has successfully completed the HAZWRAP laboratory review process. HAZWRAP Level C laboratory deliverables specified in Table 10.2 of the WP were provided.

All soil sample results are reported on a dry weight basis. Moisture content of soil samples is reported on the analytical data tables located in Appendix E.

#### 4.0 FIELD QUALITY CONTROL SAMPLES

Field quality control samples, including field duplicates, field blanks, equipment rinsates, and trip blanks, were submitted to the laboratory to provide a means of assessing the quality of the data resulting from the field sampling program. Results for field QC samples are included in Appendix E.

#### 4.1 Trip Blanks

Trip blanks were analyzed to assess potential VOC contamination during shipping and handling. Trip blanks were supplied by the laboratory, and consisted of ASTM Type II organic-free water that is preserved to pH <2 with hydrochloric acid. A trip blank was included in each sample cooler that contained environmental samples for VOC analysis. A total of 32 trip blanks were analyzed during the RI.

No significant contamination problems associated with sample shipping and handling were indicated based on trip blank results. Trip blanks were analyzed for VOCs only.

#### 4.2 Field Blanks

Field blank samples were collected during each round of sampling from each of the water sources used for sampling equipment decontamination. Field blanks were analyzed to provide information concerning the quality of potable and ASTM Type II water used for decontamination of sampling equipment. A total of four field blanks, two from each sampling round, were analyzed for all analytical parameters. Field blanks collected during the first round of sampling are identified as MANG-FB1-DI (ASTM Type II water) and MANG-FB2-PW (potable water). Field blanks collected during the second round of groundwater sampling are identified as FB-PW-GW2 (potable water) and FB-DI-GW2 (ASTM Type II water).

Potable water field blank samples did contain some contaminants, however, because significant levels of contaminants were not detected in equipment rinsates, sampling equipment appears to have been sufficiently decontaminated. Therefore, levels of contaminants in potable water blanks have not adversely affected sample results.

#### 4.3 Equipment Rinsates

Equipment rinsates were analyzed to measure the effectivesness of the decontamination process. Equipment rinsates are samples of the final analyte-free (ASTM Type II) water used in rinsing decontaminated sampling equipment. HAZWRAP specifies that equipment rinsates be collected at a frequency of one per ten investigative samples collected per sample matrix. A total of four equipment rinsates (8-RB1, 6-RB1, 7-RB1, and 8-RB2) were collected during first round soil sampling. Equipment rinsates were not collected during groundwater sampling because dedicated sampling equipment was used, and decontamination of equipment was not performed. Equipment rinsates were analyzed for all analytical parameters.

Equipment rinsate results indicate that decontamination procedures of sampling equipment were adequate.

## 4.4 Field Duplicates

Field duplicate samples are collected to give an indication of the variability of sample handling, preservation, storage, and the analytical process. Field duplicates may also provide an indication of the degree of variability within the sample matrix. HAZWRAP specifies that field duplicates shall be collected at a frequency of ten percent per matrix. A total of four field duplicate pairs were collected for groundwater, two in each round of sampling. Because of poor sample recovery, no field duplicate samples were collected for soils.

Field duplicate results are discussed in Section 6.1.2.

#### 5.0 DATA VALIDATION PROCEDURES

All environmental sample results, including field duplicates, were validated according to procedures specified in the WP. Field quality control samples, including trip blanks, field blanks, and equipment rinsates, were not validated; however, results for these samples were used in assessing environmental sample results. Results from the potable water field blanks were not used to qualify environmental samples. Decontamination water analyses (samples DCPW-1 and PAPW-1), and Toxicity Characteristic Leaching Procedure (TCLP) results were also not validated.

USEPA Contract Laboratory Program Functional Guidelines for Organic Data Review (February 1994), and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (February 1994), were used for VOC and SVOC, and metals results, respectively. HAZWRAP Level C validation guidelines for gas chromatography methods were used for validation of TPH results. Data validation was performed at HAZWRAP Level C by the Analytical Environmental Support Group of Lockheed Martin Energy Systems in Oak Ridge, Tennessee. A list of the environmental and field QC samples analyzed, and their associated Sample Delivery Groups (SDGs) are provided in Table D-1.

Data validation included completing validation worksheets with documentation on the review of all required criteria and recording specific reasons for all validation qualifiers applied. Validated laboratory Form Is are attached to the validation worksheets. The following definitions provide a brief explanation of the meaning of qualifiers assigned to sample results during data validation:

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantiation limit is approximate and may or may not represent the actual limit of quantiation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

If multiple analyses were reported by the laboratory because analytes exceeded the instrument calibration range or reanalysis was required due to laboratory QC problems, the best result for each analyte has been incorporated into one set of results for each sample parameter and is reported in Appendix E as the "composite result".

#### 5.1 VOC Data Validation

Holding times were met for all sample analyses. Several samples in Sample Delivery Group (SDG) OP11X were qualified as estimated (J/UJ) due to elevated cooler temperatures (10.5 - 12.7°C) at the time of laboratory receipt. Nondetected results for two monitoring well samples (1-MW1-GW2 and 7-MW4-GW2) were rejected (R) because recorded cooler temperatures exceeded 20°C at the time of laboratory receipt.

Instrument tuning criteria were met for all sample analyses. Internal standard area criteria were met for all samples with the exception of 6-MW3-20.5. Low area counts were reported for all three internal standards for this sample, requiring all VOC compounds to be estimated (J/UJ).

Several compounds exhibited low relative response factors (RRF) during initial calibrations (ICAL), requiring the estimation of detected compounds (J), and rejection (R) of nondetected compounds. This was specifically a problem with several ketones (acetone, 2-butanone, and 2-hexanone), and 1,2-dibromo-3-chloropropane during the analysis of low-level VOCs in water samples. Compounds that exceeded percent difference (%D) criteria for continuing calibrations were qualified as estimated (J/UJ).

Low levels of target compounds were detected in laboratory method and storage blanks, and associated trip blanks, field blanks and equipment rinsates. Laboratory blank contamination was generally limited to the common laboratory contaminants methylene chloride (0.11-2.0 ppb) and acetone (1-5 ppb). Occasional detections of carbon sulfide (1 ppb), toluene (0.01-0.05 ppb), and trichloroethene (0.41 ppb) were also observed in laboratory blanks. Associated field QC blanks

reported low levels of several VOCs. The 5X/10X rule was used in qualifying environmental samples based on laboratory and field blank contamination. Overall, the levels of contamination in laboratory and field QC blanks were not significant.

Results for three samples were estimated (J/UJ) because one or more surrogate recoveries exceeded QC limits. Samples affected were 6-SB18 8-8.3, 6-SB15 7.7-8.1, and 6-DW1 4.1-4.6. All laboratory control sample (LCS) analyses for low-level VOCs in water were within QC limits. One or more matrix spike compounds exceeded percent recovery (%R) or relative percent difference (RPD) limits for four soil matrix spike/matrix spike duplicate (MS/MSD) pairs. Because no action is taken based on MS/MSD results alone, samples were not qualified due to MS/MSD results.

#### 5.2 SVOC Data Validation

All samples were extracted and analyzed within required holding times. Instrument tuning, initial calibration, and internal standard area criteria were for all sample analyses. All 3,3'-dichlorobenzidine results for samples reported in SDGs OP01X, OP02X, OP03X, OP05X, and OP07X are qualified as estimated (J/UJ) because %D criteria were not met for continuing calibrations. Di-n-octylphthalate results for samples in SDG OP10X were qualified as estimated (J/UJ) for the same reason.

Most laboratory blank contamination was due to common phthalate esthers, including bis(2-ethylhexyl)phthalate (1-11 ppb) and di-n-butylphthalate (1-9 ppb). Bis(2-ethylhexyl)phthalate was reported in the medium level soil extraction blank for SDG OP10X at 2400 ppb. Phenol was reported in two soil extraction blanks at 97 and 47 ppb.

Field QC blanks reported phthalates, including bis(2-ethylhexyl)phthalate, butylbenzylphthalate, di-n-butylphthalate, and di-n-octylphthalate. The 5X/10X rule was used in qualifying environmental samples based on laboratory and field blank contamination. Overall, the levels of SVOC contamination in laboratory and field QC samples were not significant.

No sample results required qualification based on surrogate recoveries. One or more %R and/or RPD were not met for four MS/MSD pairs. Because no action is taken based on MS/MSD results alone, samples were not qualified due to MS/MSD results.

#### 5.3 TPH - Gasoline Range Organics (GRO) Data Validation

Holding times were met for all TPH-GRO analyses. Results for all samples in SDG OP10X, and most samples in SDG OP11X were qualified as estimated due to elevated sample cooler temperatures at the time of laboratory receipt. One sample result in SDG OP11X (1-MW1-GW2) was rejected because the sample cooler temperature exceeded 20°C at the time of receipt.

All initial and continuing calibrations, and MS/MSD analyses met QC criteria. Gasoline-range TPH was not detected in laboratory or field QC blanks.

Because one or both surrogate recoveries did not meet QC criteria, the following sample results were estimated: 7-SB7 8-8.3, 6-SB17 0.5-2.5, 6-SB17 9.5-9.9,6-SB17 4.5-5.8, and 6-DW1 4.1-4.6.

TPH-GRO analysis quantitation is based on all peaks within a retention time window established by using a gasoline standard. In addition to quantiation, the peaks are evaluated for a pattern similar to the pattern associated with the standard. Laboratory data packages for this project noted that a distinctive gasoline pattern was not observed in all samples reported with detectable purgeable organic material in the gasoline range. Because gasoline results were quantiated using the area of all components from toluene through dodecane, it is possible to report positive results for the presence of gasoline in the sample analysis due to any purgeable organic material that my be present in this range. For this reason, detected TPH-GRO results that have been so noted by the laboratory have been qualified "NJ".

## 5.4 TPH - Diesel Range Organics (DRO)/Motor Oil Data Validation

All samples were extracted and analyzed within holding times. Initial and continuing calibration criteria were met for all sample analyses, and DRO/motor oil was not detected in laboratory or field QC blanks.

Surrogate recoveries were within laboratory QC limits for all samples except those that required dilution of the sample extract. Surrogate compounds for these samples were diluted out and recoveries were below QC limits. Since surrogates were diluted out to bring the environmental sample concentration within the calibration range, and the results of two surrogate compounds do not necessarily reflect the behavior of the entire class of compounds, results were not qualified based on low surrogate recoveries for diluted samples.

All MS/MSD %R and RPD results were within QC criteria with the exception of one %R and one RPD value. Sample results were not qualified based on MS/MSD results.

Diesel-range TPH results were quantitated using the area of all components from n-C12 to n-C24, and motor oil TPH results were quantitated using the area of all components from n-C24 to n-C40. Laboratory data packages noted that a distinctive diesel and/or motor oil pattern was not observed for all samples reported with detectable organic material for these fractions. Because it is possible to report positive results for the presence of diesel and motor oil in the sample analysis due to any extractable organic material that may be present in these ranges, detected diesel and motor oil results that have been so noted by the laboratory have been qualified "NJ".

#### 5.5 TPH-JP4 Data Validation

All samples were extracted and analyzed within holding times. Initial and continuing calibration criteria were met for all sample analyses, and TPH-JP4 was not detected in laboratory of field QC blanks.

The JP4 result for sample 8-MW3-GW2 was estimated (UJ) due to low surrogate recovery (46%). All other surrogate recoveries were within laboratory QC limits except for samples that required dilution of the extract prior to analysis. The surrogate compound for these samples was diluted out and recoveries were below QC limits. Since the surrogate was diluted out to bring the environmental sample concentration within the calibration range, and the result of one surrogate compound does not necessarily reflect the behavior of the entire class of compounds, results were not qualified based on low surrogate recoveries for diluted samples.

MS/MSD analysis was not performed for TPH-JP4. Because the project WP did not require MS/MSD analysis for TPH fractions, and since data are not qualified based on MS/MSD results alone, no action was taken.

#### 5.6 Metals Data Validation

Holding times were met for all sample analyses. Requirements for instrument calibration, and initial and continuing calibration verification were met for all analyses.

Several metals were frequently detected at low concentrations in associated laboratory preparation and instrument blanks. Detections did not exceed the Contract Required Detection Limit (CRDL), and the 5X rule for blank contamination was following during data validation.

Field QC blanks (field blanks and equipment rinsates) also reported detectable concentrations of several analytes. Because laboratory blanks reported similar levels of contamination and were used to qualify samples according to the 5X rule, no sample results were qualified based on field QC blank results.

Matrix spike %Rs were not within QC limits for several MS analyses. Sample results for selenium and antimony were frequently qualified as estimated (J/UJ) due to low MS recoveries. For SDG OP10X, all results for antimony, arsenic, barium and chromium were estimated based on MS %Rs. Thallium results in SDGs OP05X and OP08X were estimated because %Rs were slightly below QC limits.

All LCS recoveries were within QC limits with the exception of the aqueous LCS for thallium in SDG OP02X. As a result, the thallium result for sample 6-DW1-W1 is estimated.

Laboratory duplicate precision criteria were met for all duplicate analyses with the exception of chromium in SDG OP10X. For this reason, chromium results for all samples in this SDG are estimated.

Inductively Coupled Plasma (ICP) serial dilution criteria were met for all SDGs, except zinc in OP09X (total metals). As a result, the zinc result for sample 1-MW2-GW3 is estimated.

Graphite Furnace Atomic Absorption (GFAA) analytical spike criteria were frequently outside QC limits for arsenic, selenium thallium, and antimony. As a result, affected sample results have been qualified as estimated (J/UJ).

Following data validation, results that were reported with a "B" qualifier by the laboratory, indicating that the reported result was between the Instrument Detection Limit (IDL) and the CRDL, were qualified "J".

# 6.0 PRECISION, ACCURACY, REPRESENTATIVENESS, COMPARABILITY AND COMPLETENESS (PARCC) PARAMETERS

The quality of chemical data can be determined by reviewing the parameters accuracy, precision, and representativeness. The completeness and comparability parameters also measure data quality, but to a lesser extent. This section discusses the PARCC parameter results for validated environmental samples collected during the RI. PARCC parameter objectives are discussed in Section 5.0 of the Quality Assurance Project Plan (QAPP). The QAPP is included in the RI Work Plan as Appendix B.

#### 6.1 Precision

Precision defines the variability between multiple measurements resulting from the same process. For chemical analyses, precision is determined by analyzing duplicate samples and calculating the relative percent difference (RPD) between results.

#### 6.1.1 Laboratory Precision

Laboratory precision in organic analyses (VOC, SVOC, and TPH) is determined through comparison of MS/MSD samples, and is expressed as RPD between results. The low level Contract Laboratory Program (CLP) method for VOCs in water does not require the analysis of MS/MSD samples, but instead reports the results of an LCS containing twelve of the target VOCs. Because no duplicate analysis is performed, laboratory precision for aqueous VOCs is not determined.

The project WP did not require the analysis of MS/MSD samples for TPH fractions. Because the laboratory did perform MS/MSD analysis for TPH-GRO and TPH-DRO/Oil fractions, laboratory precision was determined for these parameters. The laboratory did not analyze MS/MSD samples for TPH-JP4. Laboratory precision for organic parameters is summarized below.

Parameter	# MS/MSD pairs	RPDs outside criteria	% RPDs within criteria
VOC	Soil - 8	4 of 40	90
SVOC	Soil - 4	1 of 44	97.7
	Water - 4	0 of 44	100
TPH-GRO	Soil - 4	0 of 4	100
	Water - 6	0 of 6	100
TPH-DRO/Oil	Soil - 4	0 of 4	100
	Water - 3	0 of 3	100

Overall laboratory precision for organic parameters (excluding TPH-JP4 and aqueous VOCs) is 96.6%.

Laboratory precision for metals analysis is determined through comparison of unspiked duplicate samples. A total of four laboratory duplicate pairs were analyzed for soil, and six for water. RPD criteria were met for all duplicate analyses, with the exception of chromium for one soil duplicate analysis. A total of 99.3% of laboratory results for metals met duplicate RPD criteria.

Overall, laboratory precision for organic and inorganic analyses shows that 98.0% of MS/MSD and sample duplicate results performed by the laboratory met precision criteria. This meets the overall goal for laboratory precision of 90% specified in the QAPP.

## 6.1.2 Sampling Precision

Sampling precision is measured through the analysis of field duplicate samples. As is noted in Section 4.4, field duplicate samples were not collected for soils, therefore sampling precision cannot be determined for soil samples collected during the RI. The following groundwater field duplicates were collected:

Sample ID	Field Duplicate ID
1-MW2-GW2	1-MW2-GW2A
7-MW3-GW2	7-MW3-GW2A
8-MW2-GW2	8-MW2A-GW2
6-MW3-GW2	6-MW3A-GW2

Field duplicate precision for groundwater samples was evaluated using the following acceptance criteria:

- If both results are >5X the CRDL/CRQL, the RPD must be  $\leq 40$ .
- If one or both results are <5X the CRDL/CRQL, the difference between the two results must be  $\leq$ 2X the CRDL/CRQL.

All field duplicate results met the above criteria for all parameters with the exception of TPH. For field duplicates 6-MW3-GW2 and 6-MW3A-GW2, precision criteria was not met for TPH-Diesel (RPD = 102) and TPH-JP4 (RPD = 107). For field duplicate pairs, 99.6% of the results met precision criteria. Total precision (laboratory precision and sampling precision) for the RI is determined to be 98.8%, which meets the goal of 90% specified in the WP, and indicates that sample results for the RI may be considered precise.

#### 6.2 Accuracy

Accuracy defines how close a measured parameter is to its true value. For organic methods (VOC, SVOC, and TPH), accuracy is evaluated through the analysis of surrogate compounds and select target compounds added to the samples. The accuracy of all target compounds is determined from how well these compounds are recovered. A total of 94.0% of organic MS/MSD, LCS, and surrogate recoveries met the criteria for accuracy specified in the WP. Organic accuracy results are summarized below.

**Accuracy - Organic Parameters** 

Parameter	MS/MSD %Rs	Surrogate %Rs	Percentage of
	outside criteria	outside criteria	%Rs and surrogates within criteria
VOC	Soil: 18 of 80	Soil: 3 of 144	Soil: 90.6
	*Water: 0 of 72	Water: 0 of 34	Water: 100
SVOC	Soil: 1 of 88	Soil: 3 of 344	Soil: 99.1
	Water: 20 of 88	Water: 0 of 248	Water: 94.0
TPH-GRO	Soil: 0 of 8	Soil: 7 of 86	Soil: 92.6
	Water: 0 of 12	Water: 0 of 62	Water: 100
TPH-Diesel/Oil	Soil: 1 of 8	Soil: 14 of 86	Soil: 84.0
	Water : 0 of 6	Water: 0 of 62	Water: 100
ТРН-ЈР4	Not applicable	Soil: 6 of 43 Water: 2 of 31	Soil: 86.0 Water: 93.5

MS/MSD analysis is not required for low-level VOCs in water. The percent recoveries reported are for aqueous LCS recoveries.

The majority of aqueous MS/MSD recoveries that were outside QC criteria for SVOC analysis were due to recoveries that slightly exceeded the upper QC limit. These exceedances are probably not due to matrix interferences, but to better laboratory extraction efficiencies than have been established by CLP method QC control limits. The accuracy of aqueous SVOC results should not be affected due to MS/MSD recoveries.

For metals analysis, accuracy is evaluated through the percent recoveries of matrix spikes and LCSs. Nine aqueous, and four solid LCSs were analyzed for metals. Percent recoveries were met for all solid LCSs. For one aqueous LCS, the %R for thallium was slightly below QC limits.

A total of four soil, and six aqueous matrix spike samples were analyzed for metals. Eleven of 56 soil, and six of 84 aqueous spike results did not meet %R criteria. Most of the results that were outside criteria were due to low recoveries of antimony, selenium, and thallium, indicating that reported sample results for these metals may be biased low. Overall, 94.4% of matrix spike and LCS recoveries for metals met the accuracy criteria specified in the WP.

Overall analytical accuracy for all parameters analyzed for the project is 94.2%, which meets the 90% accuracy goal specified in the WP, and indicates that sample results generated for the RI may be considered accurate.

#### 6.3 Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness of the data was ensured by using proper sampling techniques and analytical procedures.

Samples were collected according to procedures specified in the RI WP. To ensure sample integrity, aqueous samples were chemically preserved (if required) at the time of collection. All samples, with the exception of aqueous metals, were maintained at 4±2°C until analyzed. Samples that did not meet temperature preservation requirements were qualified, if necessary, during data validation. Field QC samples, including trip blanks, field blanks, and equipment rinsates, were analyzed to evaluate the possibility of cross-contamination during sample collection and shipping. Results of field QC samples were evaluated during data validation, and used to qualify environmental samples when required.

Samples were analyzed according to approved USEPA methodology within required holding times. Method blanks or preparation blanks (for organic or inorganic analysis, respectively) were prepared and analyzed at the laboratory along with environmental sampes to provide a means of assessing contamination that may have been introduced during sample preparation and analysis. Results of laboratory blank analyses were used during data validation, and used to qualify environmental sample results when required.

#### 6.4 Comparability

Comparability is a quantitative parameter expressing the confidence with which one data set can be compared to another, and is limited to the other PARCC parameters, because only when precision and accuracy are known, can data be compared with confidence.

Analytical data for the RI were generated according to approved USEPA procedures which specify required processes that will ensure that data of known quality will be generated. The laboratory adhered to these requirements, which include: holding times, GC/MS tuning, initial and continuing calibrations, surrogate recoveries, MS/MSD recoveries, LCS recoveries, method blanks, internal standards, and detection limits.

Standard reference materials, traceable to the National Institute of Standards and Technology (NIST) were used for instrument calibration. In addition, the laboratory successfully analyzed a performance evaluation (PE) sample submitted by Lockheed Martin Energy Systems. As a result, analytical data generated for the RI should be comparable with other measurement data for similar samples and conditions.

## 6.5 Completeness

Completeness is an evaluation of the percentage of measurements judged to be valid, and is measured following data validation. Data qualified as a result of validation can be considered valid data, but rejected points are not valid. Completeness for the RI was determined as the number of valid data points for environmental samples (including field duplicates) compared to the total number of data points analyzed and reported.

A total of 131 of 9404 environmental sample data points generated for the RI were rejected during data validation. All rejected data points were VOCs in water samples. Eighty-six of these points were results for acetone, 2-butanone, 2-hexanone, and 1,2-dibromo-3-chloropropane that were rejected due to low RRFs during GC/MS calibration. The remaining results were rejected due to elevated sample cooler temperatures at the time of receipt at the laboratory.

Of the total environmental data points generated for the RI, 98.6% are valid (useable). This meets the completeness objective of 90% specified in the RI WP.

#### 7.0 OVERALL DATA QUALITY

Environmental samples were collected and analyzed according to the procedures specified in the WP. Holding times were met for all environmental samples for all parameters. All samples that were collected, with the exception of one equipment rinsate, were analyzed and reported by the laboratory. Trip blanks, field blanks, and groundwater field duplicate samples were collected and analyzed at the required frequency. Field duplicates were not collected for soil samples. Four equipment rinsates were collected during soil sampling, resulting in a 12% frequency of collection. Because dedicated sampling equipment was used for groundwater sampling, equipment rinsates were not collected for water samples.

Data limitations include the limited number of ketone (acetone, 2-butanone, and 2-hexanone) and 1,2-dibromo-3-chloropropane results for aqueous samples that were not rejected during validation. Due to the poor purging efficiency for the compounds, and resulting low RRFs, these compounds were rejected.

Overall, the quality of analytical data generated for this project is very good. The percentages of data that met the objectives for accuracy, precision, and completeness specified in the RI WP, exceeded project goals. Therefore, the data generated for this project is sufficient for making decisions regarding any further actions at the IRP sites investigated during the RI.

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Sample ID	SDG	VOC	SVOC		TPH-Extractable	Total Metals	Dissolved Metals
8-SB6-0.5-2.4	OP01X	Х	Х	Х	X	Х	NA
8-SB6-4.5-5.7	OP01X	X	Х	Х	X	X	NA
8-SB6-9.5-10.3		Х	X	Х	X	X	NA
8-SB7-0.5-2.5	OP01X	X	Х	Χ	X	Х	NA
8-SB7-4.5-5.8	OP01X	Х	Х	Х	X	X	NA
8-SB7-8.9-10.3		Х	X	Χ	X	X	NA
8-SB8-0.5-2.5	OP01X	Х	X	Х	Х	X	NA
8-SB8-4.5-5.5	OP01X	X	X	Х	X	X	NA
8-SB8-9.5-10.5		X	Х	Х	X	Х	NA
8-RB1	OP01X	X	X	Х	Х	X	NA
8-TB1	OP01X	X	NA	NA	NA	NA	NA
8-TB2	OP01X	X	NA	NA	NA	NA	NA
6-SB15-0.5-2.5		X	X	X	X	X	NA
6-SB15-2.5-4	OP01X	X	X	X	X	X	NA
6-SB15-7.7-8.1		X	X	X	X	Х	NA
6-SB17-0.5-2.5		X	X	X	X	X	NA
6-SB17-4.5-5.8		$\frac{x}{x}$	X	X	X	X	NA
6-SB17-9.5-9.9		X	X	X	X	X	NA
6-SB18-0.5-2.5		$\frac{x}{x}$	X	X	X	X	NA
6-SB18-6.4-7.3		X	$\frac{\hat{x}}{x}$	X	X	X	NA
6-SB18-8-8.3	OP01X	X	X	X	X	X	NA
6-RB1	OP02X	X	X	X	NA NA	X	NA
6-TB1	OP01X	X	NA NA	NA NA	NA NA	NA	NA NA
6-TB2	OP02X	X	X	X	X	X	NA NA
6-DW1-4.1-4.6	OP02X	$\hat{\mathbf{x}}$	X	$\hat{\mathbf{x}}$	X	X	NA NA
6-DW1-7.3-7.6		X	X	x -	X	X	NA NA
7-SB5-1-3	OP03X	$\frac{\hat{x}}{x}$	X	X	X	X	NA NA
7-SB1-4.5-5.4	OP03X	X	X	X	X	X	NA NA
7-SB5-8-8.6	OP03X	$\frac{\lambda}{X}$	X	X	X	X	NA NA
7-SB5-0-0.0	OP02X	$\frac{\lambda}{X}$	X	X	X	X	NA NA
7-SB6-3.5-5.5	OP02X	X	X	X	X	X	NA NA
7-SB6-7.2-8	OP02X	X	x	X	X	X	NA NA
7-SB0-7.2-0 7-SB7-1-3	OP02X	X	X	X	X	X	NA NA
7-SB7-3.4-5.2	OP02X	$\frac{\lambda}{X}$	X	X	X	X	NA NA
7-SB7-8-8.3	OP02X	X	X	X	X	X	NA NA
7-SB7-8-8.3 7-DW1-1.2-3.2		X	X	X	X	X	NA NA
7-DW1-1.2-3.2 7-DW1-3.2-4.2	OP02X	X	X	X	X	X	NA NA
7-DVV1-3.2-4.2	OP02X	X	NA NA	NA	NA NA	NA NA	NA NA
7-1B1 7-TB2	OP03X	X	NA NA	NA NA	NA NA	NA NA	NA NA
6-DW1-W1	OP02X	$\frac{\hat{x}}{x}$	X	X	X	X	NA NA
	OP02X	X	NA NA	NA NA	NA NA	NA NA	NA NA
6-TB3		X	X	X	X	X	NA NA
7-RB1	OP02X	X	NA NA	NA NA	NA NA	NA	NA NA
7-TB3	OP02X	X	X	X	X	X	NA NA
6-SB16-0.9-3.9		X	X	X	X	X	NA NA
6-SB16-3.9-4.5			X	X	X	X	NA NA
6-SB16-8.5-9.5		X		X	X	X	NA NA
8-SB9-1-3	OP03X	X	X	1	X	X	NA NA
8-SB9-4.5-5.5	OP03X		X	X		X	NA NA
8-SB9-8.5-9.4	OP03X		X	X	X		
8-SB10-1-3	OP03X	X	X	X	X	X	NA

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Table D-1

Sample ID	SDG	VOC	SVOC	TPH-GRO	TPH-Extractable	Total Metals	Dissolved Metals
8-SB10-4.5-6.5	OP03X	X	Х	Х	Х	X	NA
8-SB10-9-9.9	OP03X	Х	Х	Х	Х	Х	NA
8-RB2	OP03X	Х	Х	X	Х	X	NA
8-TB3	OP03X	Х	NA	NA	NA	NA	NA
8-TB4	OP03X		NA	NA	NA	NA	NA
MANG-FB1-DI			Х	Χ	X	X	NA NA
MANG-FB2-PV		X	X	X	X	X	NA
FB-TB1	OP04X	X	NA	NA	NA	NA	NA NA
6-MW2-20	OP04X	X	NA	NA	NA	NA	NA NA
6-MW3-20.5	OP04X		NA	NA	NA	NA	NA
7-MW2-20.5	OP04X		NA	NA	NA NA	NA NA	NA NA
7-MW4-20.5	OP04X	X	NA	NA NA	NA NA	NA NA	NA NA
7-MW5-20.5	OP04X	X	NA	NA	NA NA	NA NA	NA NA
7-TBA	OP04X	X	NA	NA	NA NA	NA NA	NA NA
1-MW2-GW1	OP04X	X	NA	NA NA	NA NA		
7-MW3-GW1	OP04X	X	NA NA			NA NA	NA NA
6-MW1-GW1	OP04X	X		NA NA	NA NA	NA NA	NA NA
			NA	NA NA	NA NA	NA	NA
6/7-TB1 7-MW4-GW1	OP04X	X	NA V	NA V	NA NA	NA	NA NA
	OP05X	X	X	X	X	Х	X
7-MW5-GW1	OP05X	X	X	X	Х	X	X
TB-C	OP05X	Х	NA	NA	NA	NA	NA
7-MW2-GW1	OP05X	Х	Х	Х	X	X	X
6-MW2-GW1	OP05X	Χ	X	Х	X	X	X
TB-B	OP05X	Х	NA	NA	NA	NA	NA
8-MW2-GW1	OP07X	Х	X	Х	X	X	X
8-MW4-GW1	OP07X	Х	Х	X	X	X	X
TB-D	OP07X	Х	NA	NA	NA	NA	NA
6-MW1-GW2	OP07X	Х	X	X	X	X	X
G-MW3-GW1	OP07X	Х	Х	Х	X	X	X
TB-E	OP07X	Х	NA	NA	NA	NA	NA
8-MW2-GW1	OP07X	Х	Х	X	X	X	X
8-MW3-GW1	OP07X	Χ	X	X	X	X	Χ
TB-F	OP07X	Х	NA	NA	NA	NA	NA
7-MW3-GW2	OP07X	X	X	X	Χ	X	Χ
7-MW3-GW2A		X	Х	Х	X	X	X
TB-G	OP07X	Х	NA	NA	NA	NA	NA
1-MW2-GW2	OP08X	X	Х	Х	X	X	X
1-MW2-GW2A	OP08X	Х	X	Χ	X	Х	X
TB-H	OP08X	X	NA	NA	NA	NA	NA
1-MW1-GW1	OP08X	Х	Х	Χ	X	Х	X
TB-I	OP08X	Х	NA	NA	NA	NA	NA
7-MW5-GW2	OP09X	X	X	Χ	X	Х	X
ТВ-В	OP09X	Х	NA	NA	NA	NA	NA
1-MW2-GW3	OP09X	X	Х	Х	X	Х	X
7-MW2-GW2	OP09X	X	Х	X	X	Х	X
TB-A	OP09X	Х	NA	NA	NA	NA	NA
6-MW1-GW3	OP09X	X	Х	X	X	Х	Х
6-MW2-GW2	OP09X	X	Х	X	Х	X	X
TB-C	OP09X	X	NA	NA	NA	NA	NA
8-MW2-GW2	OP09X	X	X	X	X	Х	Х

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# Table D-1

Sample ID	SDG	VOC	SVOC	TPH-GRO	TPH-Extractable	Total Metals	Dissolved Metals
8-MW2A-GW2	OP09X	X	Х	Х	X	X	X
TB-E	OP09X	X	NA	NA	NA	NA	NA
8-MW1-GW1	OP09X	Х	Х	Х	Х	Х	X
8-MW3-GW2	OP09X	Х	Х	Х	X	Х	X
TB-F	OP09X	X	NA	NA	NA	NA	NA
6-MW3-GW2	OP09X	Χ	Х	X	X	X	X
6-MW3A-GW2	OP09X	Х	Х	Х	X	Х	X
TB-D	OP09X	Х	NA	NA	NA	NA	NA
DCPW-1	OP11X	Х	Х	Х	X	Х	NA
PADW-1	OP11X	Х	X	X	X	X	NA
TB-I	OP11X	X	NA	NA	NA	NA	NA
FB-DI-GW2	OP11X	Х	Х	Х	X	X	NA
FB-PW-GW2	OP11X	Х	Х	Х	X	X	NA
TB-G	OP11X	Х	NA	NA	NA	NA	NA
8-MW4-GW2	OP11X	Х	Х	Х	X	X	X
7-MW3-GW3	OP11X	Х	Х	Х	Х	X	Х
TB-J	OP11X	Х	NA	NA	NA	NA	NA
1-MW1-GW2	OP11X	Х	X	Х	X	X	Х
7-MW4-GW2	OP11X	X	Х	Х	X	X	Х
ТВ-Н	OP11X	Х	NA	NA	NA	NA	NA
MANG-SS1-0-1	OP10X	Х	Х	Χ	X	Χ	NA
MANG-SS2-0-1	OP10X	X	Х	Χ	X	Х	NA
MANG-SS3-0-1	OP10X	Х	Х	Χ	X	Χ	NA
TB-K	OP10X	Χ	NA	NA	NA	NA	NA

# APPENDIX E ANALYTICAL DATA SUMMARIES AND VALIDATION

Note: "D" - In addition to the data qualifiers listed and discussed in Appendix D the "D" flag for dilution is defined. When one or more compound in a sample has a response that exceeds the initial calibration range of the instrument for that specific analysis the sample or extract will require dilution and reanalysis. When this occurs, all such compounds on the Form I are required to be flagged with a "D" flag for dilution.

Site	∞	∞	∞	9	<b>9</b> 0
Location					SB8
Sample Depth					9.5-10.5
G	, erre	• 101	100.0	<b>E</b> 5	3 01 3 0 800 8
Sample Number	701-0	101-0	194-6	9-101	8-5158-9.3-10.3
Laboratory Sample ID	9604771-05	9604771-12	9604771-01	9604798-07	9604771-06
Matrix	water	water	water	water	lios
Date Sampled	4/25/96	4/25/96	4/25/96	4/26/96	4/25/96
Date Analyzed	2/1/96	2/1/96	5/1/96	9/1/9	5/2/96
CRQL	٠.				
Chloromethane 10	10 U	10 U	10 U	10 U	1300 U
Vinvl Chloride 10	10 U	10 U	10 U	10 U	1300 U
		10 01	100	10 U	U 0001
		1101	1101	11 01	13001
•					5 0051
iorocinene		0 : :	) ·	2 :	0.0001
	0 01	0.01	<b>f †</b>	0.01	f 078
Carbon Disulfide 10	10 U	10 U	10 C	10 U	1300 U
Methylene Chloride 10	10 OI	10 U	2.5	10 OI	t 77 J
1.1-Dichloroethane 10	10 U	10 U	10 U	10 U	1300 U
	10 U	100	10 U	10 U	1300 U
	10 U	D 01	3.1	10 U	1300 U
ornethane	11 01	10 11	10 01	10 OI	1300 U
	11 01	11 01	11 01	11 01	11 0061
		11 01	11 01	11 01	1300 11
4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		1101		11 01	13001
	101	1101	11 01	11 01	1300 11
1.3 Post control of 10				2 OF	13001
•		1101	-	11 01	13001
		5 OF	11 01	11 01	13001
		0 01			1300
-2-Pentanone			0 1		0 met
	-	0.01	4 4	0 01	420 1
bene		0.01	0.01	0.01	1300 U
1,1,2-Trichloroethane 10		10 U	10 U	D 01	1300 U
thene		10 U	10 U	10 O	1300 U
2-Hexanone 10		10 U	10 U	10 U	1300 U
Dibromochloromethane 10	10 U	10 U	10 U	10 U	1300 U
	10 U	10 U	10 U	10 U	1300 U
Ethylbenzene 10	10 U	10 U	10 U	10 U	250 J
Styrene 10	10 U	10 U	10 U	10 U	1300 U
Bromoform 10	10 U	10 U	10 U	10 U	1300 U
1.1.2.2-Tetrachloroethane	10 U	10 U	10 U	10 U	1300 U
1.2-Dichloroethene (total)	10 U	10 U	10 U	10 U	86 J
	10 U	10 U	10 U	10 U	1900
Total TIC concentration	0	0	0	0	20800
Units (ug/kg) Soil, (ug/L) Water					
Dilution Factor	I	1	1		1
Sample Weight/Volume	5 mL	5 mL	S mL	5 mL	4.0 g (Medium level)
and the second s					í

Volatile Organic Compounds						
Site		<b>∞</b>	000	<b>0</b> 0	œ	•
Location		. SB8	SB8	SB8	SBS	SB7
Sample Depth		4.5-5.5	4.5-5.5	4.5-5.5	\$ 6-5 0	8 9-10 3
Sample Number	*	8-SB8-4.5-5.5DL	8-SB8-4.5-5.5	8-SB8-4.5-5.5	8-SB8-0.5-2.5	8-SB7-8.9-10.3
Laboratory Sample ID		9604771-08DL	9604771-08	9604771-08	9604771-07	9604771-02
Matrix		ios	lios	lios	soil	lios
Date Sampled		4/25/96	4/25/96	4/25/96	4/25/96	4/25/96
Date Analyzed		96/1/9	4/30/96	Composite Results	4/30/96	9/3/96
Chloromethane	10 I	1400 11	11 11	11 11	11 .	1
	10	1400 U	0 11		0 11 11	011
Bromomethane 1	10	1400 U	D 11	0 ==		
	10	1400 U	11 11		11 11	E 11
thene	10	1400 U	0 II U	n II	11 11	S 11
	10	910 J	540 J	f 016	140 J	130 1
Carbon Disulfide	10	1400 U	1 J	1 1	r I	1 II
Methylene Chloride	10	90 J	11 U	11 U	11 0	n
1, 1-Dichloroethane	10	1400 U	11 U	11 U	11 U	D 11
2-Butanone	10	1400 U	10 J	10 J	23	11 J
	10	1400 U	11 U	11 U	11 U	J1 U
	10	1400 U	11 U	11 U	11 U	11 U
etrachloride	10	1400 U	11 U	11.0	11 U	11 U
	10	1400 U	11 U	11 U	11 U	111 U
ne	10	1400 U	11 U	11 U	11 U	11 U
	10	1400 U	11 U	11 U	11 U	11 U
	01	1400 U	11 U	11 U	11 U	11 U
	10	1400 U	11 U	11 U	11 U	11 U
9	01	1400 U		11 U	11 U	11 U
I-2-Pentanone	01:	1400 U	U II	D II	22	n II
	01.0	1400 U	11 U	D II	U 11	n n
bene	or :	1400 U	D II	11 U	11 U	11 U
ane	OF 5	1400 U	O II	110	11 U	11 U
1 erachiorocurene	01 2	1400 U	011	0 ::	11 U	) i U
eromothum e	2 2	1400 0	11	;;;	ſ II ;	f e
		1400 11		0 ::		
		1400 11	)			
	10	1400 11	2: -	) <del> </del>	6 II I	
ш	- 01	1400 U		) II I	: : : : : : : : : : : : : : : : : : :	
1,1,2,2-Tetrachloroethane	10	1400 U	1111	1111	110	11 11
	10	1400 U	16	6	) +: •	
	10	1400 U	r T	1.1		)
Total TIC concentration	····	1100	103			219
Units (ug/kg) Soil, (ug/L) Water						
Dilution Factor	,		_		1	-1
Sample Weight/Volume	4.0 g	4.0 g (Medium level)	5.0 g	Composite Results	5.0 g	5.0 g
	_	×	∞	<b>x</b>	12	<b>0</b> 0

Volatile Organic Compounds					
Site	∞	<b>∞</b>	<b>∞</b>	<b>∞</b>	<b>∞</b>
Location	SB7	SB7	SB7	SB7	SB6
Sample Depth	4.5-5.8	0.5-2.5	0.5-2.5	0.5-2.5	9.5-10.3
Sample Number	8-SB7-4.5-5.8	8-SB7-0.5-2.5DL	8-SB7-0.5-2.5	8-SB7-0.5-2.5	8-SB6-9.5-10.3
Laboratory Sample ID	9604771-03	9604771-04DL	9604771-04	9604771-04	9604771-09
Matrix	soil	ios	soil	soil	soil
Date Sampled	4/25/96	4/25/96	4/25/96	4/25/96	4/25/96
Date Analyzed		2/3/96	4/30/96	Composite Results	96/8/9
Chloromethane 10	7 1 1	N 95	11 U	11 U	11 U
	011	N 98	U 11	11 U	11 U
	11 U	S6 UJ	. UII	11 U	11 UI
•	U 11	56 UJ	11 U	11 U	11 UJ
thene	11 U	26 U	11 U	11 U	11 U
Acetone 10	200 J	1 056	390 J	950 J	130 J
Carbon Disulfide 10	1 J	D 95	1.5	1 J	11 U
Methylene Chloride 10	11 U	D 95	11 U	11 U	11 U
1,1-Dichloroethane 10	11 U	D 98	11 U	n n	11 U
2-Butanone 10	11.0	93	12	12	6 J
Chloroform 10	110	26 U	11 U	11 U	11 U
1,1,1-Trichloroethane 10	11.0	199S	11 U	11 U	11 U
Carbon Tetrachloride 10	U11	26 U	U II U	11 U	11 U
Benzene 10	11 U	1 98 U	11 U	11 U	11 U
1,2-Dichloroethane 10	011	26 U	11 U	11 U	11 U
Trichloroethene 10	11 U	N 98	11 U	11 U	11 U
1,2-Dichloropropane	11 U	26 U	11 U	11 U	11 U
Bromodichloromethane 10	11 U	Ω 98	11 U	11 U	11 U
9	11 U	2 <b>9</b> D	11 U	U II	11 U
4-Methyl-2-Pentanone	n II C	14 J	25	25	n II
	n II	N 95	11 U	11 U	11 U
trans-1,3-Dichloropropene 10	11 U	26 U	11 U	11 U	11 U
1,1,2-Trichloroethane 10	11 U	199 n	n n	11 U	11 U
Tetrachloroethene 10	11 U	26 U	11 U	11 U	11 U
2-Hexanone 10	11 0	18 J	5 J	5 J	4 J
Dibromochloromethane 10	11 U	26 U	11 U	11 U	11 U
Chlorobenzene 10	11 U	26 U	11 U	11 U	11 U
Ethylbenzene 10	11	26 U	11 U	n u	11 0
Styrene 10		26 U	11 U	11 U	n n
Bromoform 10		n 95	11 U	nu	11 U
1,1,2,2-Tetrachloroethane 10		195 O	11 U	0 II U	n n
1,2-Dichloroethene (total)		26 U	11 U	11 U	11 U
Xylene (total) 10		4 J	1 J	1 1	11
Total TIC concentration	29	125	46		75
Units (ug/kg) Soil, (ug/L.) Water					
Dilution Factor	1	-	1		1
Sample Weight/Volume	5.08	1.08	5.08	Composite Results	5.08
% Moisture	<b>~</b>	10	10	10	×

Volatile Organic Compounds						
Site	-	<b>∞</b>	∞	9	9	9
Location		SB6	SB6	SB18	SB18	SB18
Sample Depth		4.5-5.7	0.5-2.4	8-8.3	, 00 00 00 00 00	8-80
Sample Number		8-SB6-4.5-5.7	8-SB6-0.5-2.4	6-SB18-8-8.3DL	6-SB18-8-8 3	6-CB18-8-8
Laboratory Sample ID		9604771-10	9604771-11	9604798-03DL	9604798-03	9604798-03
Matrix		soil	lios	soil	lios	lios
Date Sampled		4/25/96	4/25/96	4/26/96	4/26/96	4/26/96
Date Analyzed		4/30/96	2/3/96	5/2/96	4/30/96	Composite Results
	CRQL					
	10	11 U	27 U	1400 U	11 UI	11 UJ
	10	11 U	27 U	1400 U	11 UJ	11 UJ
<b>Q</b>	10	11 U	27 UJ	1400 U	11 UJ	11 UJ
	10	11 U	27 UJ	1400 U	11 UJ	11 UJ
loroethene	10	11 U	27 U	1400 U	11 UJ	11 UI
	10	64 U	610 J	2100 J	1300 J	2100 J
	10	1.5	27 U	1400 U	2 J	2.1
	10	11 U	27 U	1400 U	11 UJ	10 II
oethane	10	11 U	27 U	1400 U	11 UJ	11 UJ
	10	2 J	33	1400 U	25 J	25.1
	10	11 U	27 U	1400 U	51	III II
	10	11 U	27 U	1400 U	for the	EI II
etrachloride	10	11 U	27 U	1400 U	5 TI	11 UI
	10	11 U	27 U	1400 U	11 01	. III II
ine	10	11 U	27 U	1400 U	5 T	11 II
	10	11 U	27 U	1400 U	ID II	11 UJ
	10	11 U	27 U	1400 U	11 UJ	11 01
	01	11 U	27 U	1400 U	11 UJ	11 01
2	10	11 U	27 U	1400 U	11 UJ	11 UJ
-2-Pentanone		11 U	27 U	1400 U	11 UJ	11 03
	10	11 U	27 U	1400 U	11 UJ	11 UJ
bene	- 01	11 U	27 U	1400 U	11 UJ	11 UJ
ane	10	1.1	27 U	1400 U	11 53	11 UJ
thene	01	11 U	27 U	1400 U	11 03	11 UJ
	- 01	11 U	2 J	1400 U	11 UJ	11 UJ
methane	10	11 U	27 U	1400 U	11 01	11 UJ
v	10	11 U	27 U	1400 U	11 UJ	11 UJ
zene	10	11 U	27 U	1400 U	11 UJ	11 UJ
	10	11 U	27 U	1400 U	11 UJ	11 UJ
	10	11 U	27 U	1400 U	11 UJ	11 UJ
	10	11 U	27 U	1400 U	11 UJ	11 UJ
thene (total)	10	11 U	27 U	1400 U	11 UJ	11 UJ
	01	11 U	2 J	1400 U	11 W	11 UJ
Total TIC concentration		0	72	19230	1810	
Units (ug/kg) Soil, (ug/L) Water						
Duuton ractor	•••••	- ;		1	1	
Sample weignt volume		5.0g	2.0 g	4.0 g (Medium level)	5.0 g	Composite Result
70 MOSture	_	y	6	6	6	,

Volatile Organic Compounds					
Site	9	9	9	9	9
Location	SB18	SB18	SB18	SB18	SB15
Sample Depth	6.4-7.3	6.4-7.3	6.4-7.3	0.5-2.5	7.7-8.1
Sample Number	6-SB18-6.4-7.3DL	6-SB18-6.4-7.3	6-SB18-6.4-7.3	6-SB18-0.5-2.5	6-SB15-7.7-8.1DL
Laboratory Sample ID	9604798-02DL	9604798-02	9604798-02	9604798-01	9604798-06DL
Matrix	lios	lios	lios	soil	lios
Date Sampled	4/26/96	4/26/96	4/26/96	4/26/96	4/26/96
Date Analyzed	96/L/S	4/30/96	Composite Result	4/30/96	96/L/S
Chloromethane 10	1300 U	11 U	11 U	11 U	1400 U
	1300 U	D 11	11 U	11 U	1400 U
	1300 U	11 U	11 U	11 U	1400 U
	1300 U	U 11	11 U	11 U	1400 U
thene	1300 U	11 U	11 U	11 U	1400 U
	2600 J	2000 J	2600 J	O 59	1300 J
Disulfide	1300 U	2.3	2 J	1.5	1400 U
de	1300 U	11 U	11 U	11 U	1400 U
1.1-Dichloroethane 10	1300 U	11 U	11 U	11 U	1400 U
2-Butanone 10	1300 U	5 J	5 J	1 6	1400 U
Chloroform 10	1300 U	11 U	11 U	11 U	1400 U
1,1,1-Trichloroethane 10	1300 U	U II	11 U	11 U	1400 U
Carbon Tetrachloride 10	1300 U	11 U	11 U	11 U	1400 U
Benzene 10	1300 U	11 U	11 U	11 U	1400 U
1,2-Dichloroethane 10	1300 U	11 U	11 U	111 U	1400 U
Trichloroethene 10	1300 U	11 U	11 U	11 U	1400 U
1,2-Dichloropropane	1300 U	11 U	n n	nn	1400 U
Bromodichloromethane 10	1300 U	U II	11 U	11 U	1400 U
cis-1,3-Dichloropropene	1300 U	11 U	11 U	11 U	1400 U
4-Methyl-2-Pentanone	1300 U	11 U	11 U	11 U	1400 U
Toluene 10	1300 U	11 U	11 U	11 U	1400 U
trans-1,3-Dichloropropene 10	1300 U	11 U	11 U	11 U	1400 U
1,1,2-Trichloroethane	1300 U	11 U	11 U	11 U	1400 U
Tetrachloroethene 10	1300 U	11 U	11 U	11 U	1400 U
2-Hexanone		11 U	11 U	4 J	1400 U
Dibromochloromethane 10		11 U	11 U	11 U	1400 U
Chlorobenzene 10		11 U	11 U		1400 U
Ethylbenzene 10		11 U	11 U	11 U	1400 U
Styrene 10		11 U	11 U	11 U	1400 U
Bromoform 10		11 U	11 U	11 U	1400 U
1,1,2,2-Tetrachloroethane 10	1300 U	11 U	11 U	11 0	1400 U
1,2-Dichloroethene (total) 10		11 U	11 U	11 U	1400 U
Xylene (total) 10	1300 U	11 U	U 11	11 U	1400 U
Total TIC concentration	5770	2005		37	0
Units (ug/kg) Soil, (ug/L) Water					
Dilution Factor		1		1	-
Sample Weight/Volume	4.0 g (Medium level)	5.0 g	Composite Result	5.0 g	4.0 g (Medium level)
% Moisture	7	7	7	10	<b>ac</b>

Volatile Organic Compounds	•					
Site		9	9	9	9	9
Location		SB15	SB15	SB15	SB15	SB15
Sample Depth		7.7-8.1	7.7-8.1	2.5-4	0.5-2.5	0.5-2.5
Sample Number		6-SB15-7.7-8.1	6-SB15-7.7-8.1	6-SB15-2.5-4	6-SB15-0.5-2.5DL	6-SB15-05-25
Laboratory Sample ID		9604798-06	9604798-06	9604798-05	9604798-04DL	9604798-04
Matrix		soil	lios	soil	soil	soil
Date Sampled		4/26/96	4/26/96	4/26/96	4/26/96	4/26/96
Date Analyzed		4/30/96	Composite Result	4/30/96	96/1/5	5/3/96
	CROL	See Land				
Chloromethane	01	11 UJ	11 UJ	11 U	1400 U	198
Vinyl Chloride	 2	11 UI	11 UJ	11 U	1400 U	N 98
Bromomethane	9	11 UJ	11 UJ	11 U	1400 U	\$6 UJ
Chloroethane	10	11 03	11 UJ	11 U	1400 U	56 UJ
1,1-Dichloroethene	01	11 UI	11 UJ	11 U	1400 U	26 U
Acetone	01	1000 J	1300 J	180 J	1400 U	1600 J
Carbon Disulfide	01	2 J	2 J	11 U	1400 U	26 U
Methylene Chloride	10	11 U	11.0	11 U	1400 U	56 U
1, 1-Dichloroethane	01	11 UJ	11 U	11 U	1400 U	26 U
2-Butanone	<u> </u>	7 J	7 J	£ 88	1400 U	43 J
Chloroform	01	11 UJ	11 51	11 U	1400 U	26 U
1,1,1-Trichloroethane	01	11 UJ	11 UI	11 U	1400 U	26 U
Carbon Tetrachloride	01	11 UJ	11 UI	11 U	1400 U	26 U
Benzene	2	11 UI	11 01	11 U	1400 U	26 U
1,2-Dichloroethane	10	11 UI	11 UJ	11 U	1400 U	26 U
Trichloroethene	10	11 UJ	11 UJ	11 U	1400 U	26 U
1,2-Dichloropropane	10	11 UJ	11 UJ	11 U	. 1400 U	26 U
Bromodichloromethane	01	11 UJ	11 UJ	11 U	1400 U	26 U
cis-1,3-Dichloropropene	01	II III	11 01	11 U	1400 U	26 U
4-Methyl-2-Pentanone	 01	11 UI	11 UJ	11 U	1400 U	26 U
Toluene	0 :	11 UJ	11 UJ	11 U	1400 U	26 U
trans-1,3-Dichloropropene	<u> </u>	11 UJ	11 UJ	11 U	1400 U	\$6 U
1, 1, 2-1 richloroethane	01 :	11 01	11 UI	11 U	1400 U	26 U
l etrachloroethene	01 ;	III III	11 UI	11 U	1400 U	26 U
z-rexamone	2 :		11 6	4 J	1400 U	26 U
Libromochloromethane	91	11 03	11 CI	11 U	1400 U	26 U
Chlorobenzene	 2	11 03	11 UJ	11 U	1400 U	26 U
Ethylbenzene	 9	11 UJ	11 UJ	11 U	1400 U	2 J
Styrene	 01	11 UJ	11 UJ	11 U	1400 U	26 U
Bromotorm	01	11 UJ	11 UJ	11 U	1400 U	26 U
1, 1, 2, 2-Tetrachloroethane	01	11 UJ	11 03	11 U	1400 U	\$6 U
1,2-Dichloroethene (total)	9	11 UJ	11 UJ	11 U	1400 U	26 U
Xylene (total)	01	11 UJ	11 03	11 U	1400 U	5.3
Total TIC concentration		1143		0	0	0
Units (ug/kg) Soil, (ug/L) Water						
Dilution Factor		1 -			1	1
Sample Weignt Volume		5.0g	Composite Result	5.0 g	4.0 (Medium level)	1.0 g
70 MOBILING	-	×	•••	6	10	10

State   Depth   Contain	Volatile Organic Compounds		
CRQL   Composite Res	Site	9	
er 6-SB15-0.5- mple ID 9604798-  1	Location	SB15	
Number   6-SB15-0.5-	Sample Depth	0.5-2.5	
ory Sample ID 9604798.  mpled CRQL  credit adjusted CRQL  credit adjusted CRQL  credit and the c	Sample Number	6-SB15-0.5-2.5	
rmpled CRQL  multiane	Laboratory Sample ID	9604798-04	
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CRQL CRQL 10 10 10 10 10 10 10 10 10 10 10 10 10	Date Sampled	4/26/96	
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Composite Res	Total TIC concentration		
Composite Res	Units (ug/kg) Soil, (ug/L) Water		
Composite Res	Dilution Factor		
	Sample Weight/Volume	Composite Result	
	% Moisture	10	

Semivolatile Organic Compounds					
Site	~	•	٥	o	· ·
Location	SBS	ŝ es	0 000	o t	∞ ! !
Commole Death	000	ogs .	258	SB/	SB7
Sample Deput	9.5-10.5	4.5-5.5	0.5-2.5	8.9-10.3	4.5-5.8
Sample Number	8-SB8-9.5-10.5	8-SB8-4.5-5.5	8-SB8-0.5-2.5	8-SB7-8.9-10.3	8-SB7-4.5-5.8
Laboratory Sample ID	9604771-06	9604771-08	9604771-07	9604771-02	9604771-03
Matrix	lios	lios	lios	lios	Eos
Date Sampled	4/25/96	4/25/96	4/25/96	4/25/96	4/25/96
Date Analyzed	5/13/96	5/13/96	5/13/96	5/14/96	5/14/96
CRQL					
bis(2-Chloroethyl)ether 330	1400 U	360 U	760 U	360 U	11 028
Phenol 330	1400 U	360 U	760 U	360 13	11 025
2-Chlorophenol 330	1400 U	360 U	760 U	3001	370 11.
1,3-Dichlorobenzene 330	1400 U	360 U	760 U	300 11	370
1,4-Dichlorobenzene 330	1400 U	360 U	760 U	360 U	11 028
1,2-Dichlorobenzene 330	1400 U	360 U	760 U	360 11	370 11
2,2'-oxybis(1-chloropropane) 330	1400 U	360 U	U 097	360 11	370 11
2-Methylphenol	1400 U	360 U	760 U	360 11	370
Hexachloroethane 330	1400 U	360 U	760 U	30 D	370 11
N-Nitroso-di-n-propylamine 330	1400 U	360 U	760 U	360 U	370 11
ol Io	1400 U	360 U	760 U	360 U	370 U
Nitrobenzene 330	1400 U	360 U	109L	360 U	370 11
Isophorone 330	1400 U	360 U	760 U	O 09E	370 U
	1400 U	360 U	760 U	360 U	370 U
	1400 U	360 U	160 U	360 U	370 U
methane	1400 U	360 U	760 U	360 U	370 U
	1400 U	360 U	160 U	360 U	370 U
robenzene	1400 U	360 U	760 U	360 U	370 U
	380 J	360 U	760 U	360 U	370 U
	1400 U	360 U	O 092	360 U	370 U
	1400 U	360 U	760 U	360 U	370 U
loua	1400 U	360 U	760 U	360 U	370 U
	220 J	360 U	100 D	360 U	370 U
diene	1400 U	360 U	160 U	360 U	370 U
	1400 U	360 U	100 D	360 U	370 U
	3600 U	910 U	1900 U	010 U	920 U
thalene	1400 U	360 U	160 U	360 U	370 U
	3600 U	910 U	1900 U	910 U	920 U
	1400 U	360 U	760 U	360 U	370 U
	1400 U	360 U	160 U	360 U	370 U
iene	1400 U	360 U	109L	360 U	370 U
	1400 U	360 U	760 U	360 U	370 U
	3600 U	910 U	U 000I	910 U	920 U
nol	O 009E	910 U	1900 U	010 U	920 U
	1400 U	360 U	760 U	360 U	370 U
iene	1400 U	360 U	160 U	360 U	370 U
henol	3600 U	910 U	1900 U	O 016	920 U
Fluorene 330	1400 U	360 U	140 U	360 U	370 U

Semivolatile Organic Compounds	-					
Site		<b>∞</b>	<b>o</b> c	<b>6</b> 0	œ	∞
Location	•	SB8	SB8	SB8	SB7	SB7
Sample Depth		9.5-10.5	4.5-5.5	0.5-2.5	8.9-10.3	4.5-5.8
Sample Number		8-SB8-9.5-10.5	8-SB8-4.5-5.5	8-SB8-0.5-2.5	8-SB7-8.9-10.3	8-SB7-4.5-5.8
Laboratory Sample ID		9604771-06	9604771-08	9604771-07	9604771-02	9604771-03
Matrix		lios	soil	lios	soil	ios
Date Sampled		4/25/96	4/25/96	4/25/96	4/25/96	4/25/96
Date Analyzed		5/13/96	5/13/96	5/13/96	5/14/96	5/14/96
	CRQL					
4-Chlorophenyl-phenylether	330	1400 U	J 09E	760 U	360 U	370 U
Diethylphthalate	330	1400 U	360 U	760 U	360 U	370 U
4-Nitroaniline	800	3600 U	910 U	1900 U	910 U	. 920 U
4,6-Dinitro-2-methylphenol	800	3600 U	910 U	1900 U	910 U	920 U
n-Nitrosodiphenylamine	330	1400 U	360 U	760 U	360 U	370 U
4-Bromophenyl-phenylether	330	1400 U	360 U	160 U	360 U	370 U
Hexachlorobenzene	330	1400 U	360 U	760 U	360 U	370 U
Pentachlorophenol	800	3600 U	910 U	1900 U	910 U	920 U
Phenanthrene	330	1400 U	360 U	760 U	360 U	370 U
Anthracene	330	1400 U	360 U	760 U	360 U	370 U
Carbazole	330	1400 U	360 U	760 U	360 U	370 U
Di-n-butylphthalate	330	26 J	360 U	17 J	360 U	370 U
Fluoranthene	330	1400 U	360 U	160 U	360 U	370 U
Pyrene	330	1400 U	360 U	760 U	360 U	370 U
Butylbenzylphthalate	330	1400 U	360 U	760 U	360 U	370 U
3,3'-Dichlorobenzidine	330	1400 UJ	360 UJ	10 09Z	360 UJ	370 UJ
Benzo[a]anthracene	330	1400 U	360 U	760 U	360 U	370 U
Chrysene	330	1400 U	360 U	760 U	360 U	370 U
bis(2-Ethylhexyl)phthalate	330	100 J	360 U	086	190 J	370 U
Di-n-octylphthalate	330	1400 U	360 U	160 U	14 J	370 U
Benzo[b]fluoranthene	330	1400 U	360 U	760 U	360 U	370 U
Benzo[k]fluoranthene	330	1400 U	360 U	760 U	360 U	370 U
Benzolalpyrene	330	1400 U	360 U	U 097	360 U	370 U
Indeno[1,2,3-cd]pyrene	330	1400 U	360 U	160 U	360 U	370 U
Dibenz[a,h]anthracene	330	1400 U	360 U	760 U	360 U	370 U
Benzolg,h,i]perylene	330	1400 U	360 U	760 U	360 U	370 U
Total TIC concentration		257300	621	700	929	721
Units (ug/kg) Soil, (ug/L) Water	ng/kg				,	•
Dilution Factor		4	1	2		
Sample Weight/Volume		30.0 g	308	30.08	30.0g	30.0g
% Moisture	_	7	∞	12	<b>30</b>	S)

Semivolatile Organic Compounds						
Site		<b>∞</b>	œ	<b>∞</b>	80	v
Location		SB7	SB6	SB6	SB6	SB18
Sample Depth		0.5-2.5	9.5-10.3	4.5-5.7	0.5-2.4	8-8.3
Sample Number		8-SB7-0.5-2.5	8-SB6-9.5-10.3	8-SB6-4.5-5.7	8-SB6-0.5-2.4	6-SB18-8-8 3
Laboratory Sample ID		9604771-04	9604771-09	9604771-10	9604771-11	9604798-03
Matrix		lios	soil	soil	ios	los
Date Sampled		4/25/96	4/25/96	4/25/96	4/25/96	4/26/96
Date Analyzed	<del>-</del>	5/21/96	\$/13/96	5/13/96	\$/14/96	5/12/96
bis(2-Chloroethyl)ether	330 L	11,000,11	14 000			
Phenol	330	0 0051	360 0	370 U	730 U	730 U
2-Chlorophenol	330	0.0001	360 U	370 U	730 U	730 U
1 3-Dichlorobenzene	330	0.0061	360 U	370 U	730 U	730 U
1.4-Dichlorohenzene	330	0.0051	360 U	370 U	730 U	730 U
1.2-Dichlorobenzene	330	0.0001	360 0	370 U	730 U	730 U
2,2'-oxybis(1-chloropropane)	330	1500 11	360 U	370 U	730 U	730 U
2-Methylphenol	330	1500 11	380 0	3/0 U	730 U	730 U
Hexachloroethane	330	1500 11	360 U	3/0 U	730 U	730 U
N-Nitroso-di-n-propylamine	330	1500 11	2000	3/0 0	/30 U	730 U
4-Methylphenol	330	1500 1	360 0	3/0 U	730 U	730 U
Nitrobenzene	330	5001	380 0	3/0 (	730 U	730 U
Isophorone	330	1300	360 U	370 U	730 U	730 U
2-Nitrophenol	330	1500 1	360 0	370 U	730 U	730 U
2.4-Dimethylphenol	330	0.0001	360 U	370 U	730 U	730 U
his(2-Chloroethoxy)methane	330	0 0001	360 U	370 U	730 U	730 U
2 4-Dichlorophenol	330	0 0051	360 U	370 U	730 U	730 U
2,4-Diction opinion	330	U 0051	360 U	370 U	730 U	730 U
Nanhthalana	330	1500 U	360 U	370 U	730 U	730 U
A Chlemaniin	330	1500 U	360 U	370 U	730 U	730 U
Tr	330	1500 U	360 U	370 U	730 U	730 U
Hexachlorobutadiene	330	1500 U	360 U	370 U	730 U	730 U
4-Chloro-3-methylphenol	330	1500 U	360 U	370 U	730 U	730 U
Z-Methylnaphthalene	330	1500 U	360 U	370 U	730 U	730 U
nexachlorocyclopentadiene	330	1500 U	360 U	370 U	730 U	730 U
2,4,0-1 inchlorophenol	330	1500 U	360 U	370 U	730 U	730 U
2,4,5-1nchlorophenoi	008	3700 U	910 U	920 U	1800 U	1800 U
2-Chloronaphthalene	330	1500 U	360 U	370 U	730 U	730 U
2-Nitroanline	008	3700 U	O 016	920 U	1800 U	1800 U
Acenaphthylene	330	1500 U	360 U	370 U	730 U	730 U
Dimethylphthalate	330	1500 U	360 U	370 U	730 U	730 U
2,6-Drntrotoluene	330	1500 U	360 U	370 U	730 U	730 U
Acenaphthene	330	1500 U	360 U	370 U	730 U	730 U
3-Nitroanline	008	3700 U	910 U	920 U	1800 U	1800 U
2,4-Duntrophenol	008	3700 U	910 U	920 U	1800 U	U 0081 ·
Lybenzofuran	330	1500 U	360 U	370 U	730 U	730 U
2,4-1,mitrololuene	330	1500 U	360 U	370 U	730 U	730 U
4-Nitrophenol	008	3700 U	910 U	920 U	1800 U	1800 U
Fluorene	330	1500 U	360 U	370 U	730 U	730 U

Semivolatile Organic Compounds	•					
Site		00	∞	<b>0</b> 0	<b>0</b> 0	9
Location		SB7	SB6	SB6	SB6	SB18
Sample Depth		0.5-2.5	9.5-10.3	4.5-5.7	0.5-2.4	8-8.3
Sample Number		8-SB7-0.5-2.5	8-SB6-9.5-10.3	8-SB6-4.5-5.7	8-SB6-0.5-2.4	6-SB18-8-8.3
Laboratory Sample ID		9604771-04	9604771-09	9604771-10	9604771-11	9604798-03
Matrix		ios	lios	soil	soil	soil
Date Sampled		4/25/96	4/25/96	4/25/96	4/25/96	4/26/96
Date Analyzed		5/21/96	5/13/96	5/13/96	5/14/96	5/15/96
	CRQL					
4-Chlorophenyl-phenylether	330	1500 U	360 U	370 U	730 U	730 U
Diethylphthalate	330	1500 U	360 U	370 U	730 U	730 U
4-Nitroaniline	800	3700 U	. 910 U	920 U	1800 U	1800 U
4,6-Dinitro-2-methylphenol	800	3700 U	910 U	920 U	1800 U	1800 U
n-Nitrosodiphenylamine	330	1500 U	360 U	370 U	730 U	730 U
4-Bromophenyl-phenylether	330	1500 U	360 U	370 U	730 U	730 U
Hexachlorobenzene	330	1500 U	360 U	370 U	730 U	730 U
Pentachlorophenol	800	3700 U	910 U	920 U	1800 U	1800 U
Phenanthrene	330	1500 U	360 U	370 U	730 U	730 U
Anthracene	330	1500 U	360 U	370 U	730 U	730 U
Carbazole	330	1500 U	360 U	370 U	730 U	730 U
Di-n-butylphthalate	330	1500 U	360 U	370 U	730 U	730 U
Fluoranthene	330	1500 U	360 U	370 U	730 U	730 U
Pyrene	330	1500 U	360 U	370 U	730 U	730 U
Butylbenzylphthalate	330	1500 U	360 U	370 U	730 U	730 U
3,3'-Dichlorobenzidine	330	1500 UJ	360 UJ	370 UJ	730 UJ	730 UJ
Benzo[a]anthracene	330	1500 U	360 U	370 U	730 U	730 U
Chrysene	330	1500 U	360 U	370 U	730 U	730 U
bis(2-Ethylhexyl)phthalate	330	1 96 1	140 J	370 U	55 J	51 J
Di-n-octylphthalate	330	1500 U	12 J	370 U	730 U	730 U
Benzo[b]fluoranthene	330	1500 U	360 U	370 U	730 U	730 U
Benzo[k]fluoranthene	330	1500 U	360 U	370 U	730 U	730 U
Benzo[a]pyrene	330	1500 U	360 U	370 U	730 U	730 U
Indeno[1,2,3-cd]pyrene	330	1500 U	360 U	370 U	730 U	730 U
Dibenz[a,h]anthracene	330	1500 U	360 U	370 U	730 U	730 U
Benzolg, h, ilperylene	330	1500 U	360 U	370 U	730 U	730 U
Total TIC concentration		3480	499	431	1460	14930
Units (ug/kg) Soil, (ug/L) Water	ng/kg			. ,	•	•
Dilution Factor		4		1	2	7
Sample Weight/Volume		30.0g	30.0 g	30.0g	30.08	30.0g
% Moisture	_	10	∞	6	ń	Δ,

	•					
Site		9	9	9	9	9
Location		SB18	SB18	SB15	SB15	SB15
Sample Depth		6.4-7.3	0.5-2.5	7.7-8.1	2.5-4	\$ 6-5 0
Sample Number		6-SB18-6.4-7.3	6-SB18-0.5-2.5	6-SB15-7.7-8.1	6-SB15-2.5-4	6-SB15-0 5-7 5
Laboratory Sample ID		9604798-02	9604798-01	9604798-06	9604798-05	9604798-04
Matrix		soil	soil	lios	lios	lios
Date Sampled		4/26/96	4/26/96	4/26/96	4/26/96	4/26/96
Date Analyzed		5/14/96	\$/14/96	5/14/96	5/14/96	96/\$1/\$
	CRQL					
bis(2-Chloroethyl)ether	330	360 U	740 U	360 U	370 U	370 U
Phenol	330	360 U	740 U	360 U	370 U	370 U
2-Chlorophenol	330	360 U	740 U	360 U	370 U	370 1
1,3-Dichlorobenzene	330	360 U	740 U	360 U	370 U	370 U
1,4-Dichlorobenzene	330	360 U	740 U	360 U	370 U	370 U
1,2-Dichlorobenzene	330	360 U	740 U	360 U	370 U	370 U
2,2'-oxybis(1-chloropropane)	330	360 U	740 U	360 U	370 U	370 U
2-Methylphenol	330	360 U	740 U	360 U	370 U	370 U
Hexachloroethane	330	360 U	740 U	360 U	370 U	370 U
N-Nitroso-di-n-propylamine	330	360 U	740 U	360 U	370 U	370 U
4-Methylphenol	330	360 U	740 U	360 U	370 U	370 U
Nitrobenzene	330	360 U	740 U	360 U	370 U	370 U
Isophorone	330	360 U	740 U	O 09E	370 U	370 11
2-Nitrophenol	330	360 U	740 U	360 U	370 U	370 U
2,4-Dimethylphenol	330	360 U	740 U	360 U	370 U	370 U
bis(2-Chloroethoxy)methane	330	360 U	740 U	360 U	370 U	370 U
2,4-Dichlorophenol	330	360 U	740 U	360 U	370 U	370 U
1, 2, 4-Trichlorobenzene	330	360 U	740 U	360 U	370 U	370 11
Naphthalene	330	360 U	740 U	360 U	370 U	370 11
4-Chloroaniline	330	360 U	740 U	360 U	370 U	370 11
Hexachlorobutadiene	330	360 U	740 U	360 U	370 U	370 11
4-Chloro-3-methylphenol	330	360 U	740 U	360 U	370 U	370 1
2-Methylnaphthalene	330	360 U	740 U	360 U	370 U	370 U
Hexachlorocyclopentadiene	330	360 U	740 U	360 U	370 U	370 U
2,4,6-Trichlorophenol	330	360 U	740 U	360 U	370 U	370 U
2,4,5-Trichlorophenol	008	Ω 006	1900 U	910 U	920 U	930 U
2-Chloronaphthalene	330	360 U	740 U	360 U	370 U	370 U
2-Nitroaniline	008	D 006	1900 U	910 U	920 U	930 U
Acenaphthylene	330	360 U	. 740 U	360 U	370 U	370 U
Dimethylphthalate	330	360 U	740 U	360 U	370 U	370 U
2, 6-Dinitrotoluene	330	360 U	740 U	360 U	370 U	370 U
Acenaphthene	330	360 U	740 U	360 U	370 U	370 U
3-Nitroaniline	800	Ω 006	1900 U	910 U	920 U	930 U
2,4-Dinitrophenol	008	D 006	1900 U	910 U	920 U	930 U
Dibenzofuran	330	360 U	740 U	360 U	370 U	370 U
2,4-Dinitrotoluene	330	360 U	740 U	360 U	370 U	370 U
4-Nitrophenol	008	000 n	1900 U	O 016	920 U	930 U
Fluorene	330	360 U	740 U	360 U	370 U	370 U

Semivolatile Organic Compounds		<i>*</i>		7.		,
Site		9	9	9	<b>9</b> A	· • •
Location		SB18	SB18	SB15	SB15	SB15
Sample Depth		6.4-7.3	0.5-2.5	7.7-8.1	2.5-4	0.5-2.5
Sample Number		6-SB18-6.4-7.3	6-SB18-0.5-2.5	6-SB15-7.7-8.1	6-SB15-2.5-4	6-SB15-0.5-2.5
Laboratory Sample ID		9604798-02	9604798-01	9604798-06	9604798-05	9604798-04
Matrix		soil	soil	soil	soil	lios
Date Sampled		4/26/96	4/26/96	4/26/96	4/26/96	4/26/96
Date Analyzed		5/14/96	5/14/96	5/14/96	5/14/96	96/51/5
	CRQL					
4-Chlorophenyl-phenylether	330	360 U	740 U	360 U	370 U	370 U
Diethylphthalate	330	360 U	740 U	360 U	370 U	370 U
4-Nitroaniline	800	n 006	1900 U	010 U	920 U	O 066
4,6-Dinitro-2-methylphenol	800	D 006	U 0001	010 U	920 U	930 U
n-Nitrosodiphenylamine	330	360 U	740 U	360 U	370 U	370 U
4-Bromophenyl-phenylether	330	360 U	740 U	360 U	370 U	370 U
Hexachlorobenzene	330	360 U	740 U	360 U	370 U	370 U
Pentachlorophenol	800	N 006	U 0001	910 U	920 U	D 086
Phenanthrene	330	360 U	740 U	360 U	370 U	370 U
Anthracene	330	360 U	740 U	360 U	370 U	370 U
Carbazole	330	360 U	740 U	360 U	370 U	370 U
Di-n-butylphthalate	330	360 U	740 U	360 U	370 U	370 U
Fluoranthene	330	360 U	740 U	360 U	370 U	370 U
Pyrene	330	360 U	740 U	360 U	370 U	370 U
Butylbenzylphthalate	330	360 U	740 U	360 U	370 U	370 U
3,3'-Dichlorobenzidine	330	360 UJ	740 UJ	360 UI	370 UJ	370 UJ
Benzo[a]anthracene	330	360 U	740 U	360 U	370 U	370 U
Chrysene	330	360 U	740 U	360 U	370 U	370 U
bis(2-Ethythexyl)phthalate	330	f 06	59 J	58 J	370 U	370 U
Di-n-octylphthalate	330	360 U	740 U	360 U	370 U	370 U
Benzo[b]fluoranthene	330	360 U	740 U	360 U	370 U	370 U
Benzo[k]fluoranthene	330	360 U	740 U	360 U	370 U	. 370 U
Benzo[a]pyrene	330	360 U	740 U	360 U	370 U	370 U
Indeno[1,2,3-cd]pyrene	330	360 U	740 U	360 U	370 U	370 U
Dibenz[a,h]anthracene	330	360 U	740 U	360 U	370 U	370 U
Benzo[g,h,i]perylene	330	360 U	740 U	360 U	370 U	370 U
Total TIC concentration		0966	400	15140	578	926
Units (ug/kg) Soil, (ug/L) Water	ng/kg		•	,	•	
Dilution Factor		-	2	<b></b> 1		
Sample Weight/Volume		30.0 g	30.0 g	30.0 g	30.0g	30.0 g
% Moisture		7	10	∞	6	10

Site Location Sample Depth Sample Depth Sample ID Matrix Date Sampled Date Sampled Date Analyzed  bis(2-Chloroethyl)ether Phenol 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	CRQL 330 330 330 330 330	8-RB1 9604771-01 water 4/25/96 5/8/96 5/8/96 10 U	
Depth Number ory Sample ID mpled lalyzed loroethyl)ether lorobenzene lorobenzene lorobenzene	CRQL 330 330 330 330 330 330	8-RB1 9604771-01 water 4/25/96 5/8/96 5/8/96 10 U	
Depth Number ory Sample ID mpled lalyzed loroethyl)ether lorobenzene lorobenzene lorobenzene	CRQL 330 330 330 330 330 330	8-RB1 9604771-01 water 4/25/96 5/8/96 5/8/96 10 U	
Number ory Sample ID mpled lalyzed loroethyl)ether sphenol lorobenzene lorobenzene lorobenzene	CRQL 330 330 330 330 330 330	8-RB1 9604771-01 water 4/25/96 5/8/96 10 U	
ory Sample ID mpled lalyzed loroetityl)ether phenol lorobenzene lorobenzene	CRQL 330 330 330 330 330 330	9604771-01 water 4/25/96 5/8/96 10 U	
mpled latyzed loroethyl)ether phenol lorobenzene lorobenzene	CRQL 330 330 330 330 330	water 4/25/96 5/8/96 10 U	
mpled lalyzed hloroethyl)ether hlorobenzene hlorobenzene hlorobenzene	CRQL 330 330 330 330 330	4/25/96 5/8/96 10 U	
ralyzed nloroethyl)ether ophenol hlorobenzene hlorobenzene	CRQL 330 330 330 330 330	96/8/6 10 U	
nloroethyl)ether ophenol hlorobenzene hlorobenzene	330 330 330 330 330 330	D O O O O O O O O O O O O O O O O O O O	
bis(2-Chloroethyl)ether Phenol 2-Chlorophenol 1,3-Dichlorobenzene 1,2-Dichlorobenzene	330 330 330 330	D 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Phenol 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	330 330 330 330	D 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	330 330 330	D 01 D 01 D 01 D 01 D 01 D 01 D 01 D 01	
1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene	330 330 330	D 01 D 01 D 01 D 01 D 01 D 01 D 01 D 01	
1,4-Dichlorobenzene 1,2-Dichlorobenzene	330 330 330	D 01 D 01 D 01 D 01 D 01 D 01 D 01 D 01	
1,2-Dichlorobenzene	330	D 01 D 01 D 01 D 01 D 01 D 01 D 01 D 01	
	330	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
2,2'-oxybis(1-chloropropane)		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
2-Methylphenol	330	10 U U U U U U U U U U U U U U U U U U U	
Hexachloroethane	330	10 U	
N-Nitroso-di-n-propylamine	330	10 U U U U U U U U U U U U U U U U U U U	
4-Methylphenol	330	10 U U U U U U U U U U U U U U U U U U U	
Nitrobenzene	330	10 U U U U U U U U U U U U U U U U U U U	
Isophorone	330	U 01	
2-Nitrophenol	330	11 (1	
2,4-Dimethylphenol	330	0.01	
bis(2-Chloroethoxy)methane	330	10 U	
2,4-Dichlorophenol	330	10 U	
1,2,4-Trichlorobenzene	330	10 U	
Naphthalene	330	10 U	
4-Chloroaniline	330	10 U	
Hexachlorobutadiene	330	10 U	
4-Chloro-3-methylphenol	330	10 U	
2-Methylnaphthalene	330	10 U	
Hexachlorocyclopentadiene	330	10 U	
2,4,6-Trichlorophenol	330	10 U	
2,4,5-Trichlorophenol	008	25 U	
2-Chloronaphthalene	330	10 U	
2-Nitroaniline	800	25 U	
Acenaphthylene	330	10 U	
Dimethylphthalate	330	10 U	
2,6-Dinitrotoluene	330	10 U	
Acenaphthene	330	10 U	
3-Nitroaniline	008	25 U	
2,4-Dinitrophenol	800	25 U	
Dibenzofuran	330	10 U	
2,4-Dinitrotoluene	330	10 U	
4-Nitrophenol	800	25 U	
Fluorene	330	10 U	

Semivolatile Organic Compounds	•	
Site		∞
Location		
Sample Depth		
Sample Number		8-RB1
Laboratory Sample ID		9604771-01
Matrix		Water
Date Sampled		4/25/96
Date Analyzed		9/8/5
	CRQL	
4-Chlorophenyl-phenylether	330	10 U
Diethylphthalate	330	10 U
4-Nitroaniline	800	25 U
4,6-Dinitro-2-methylphenol	800	25 U
n-Nitrosodiphenylamine	330	10 U
4-Bromophenyl-phenylether	330	10 U
Hexachlorobenzene	330	10 U
Pentachlorophenol	008	25 U
Phenanthrene	330	10 U
Anthracene	330	10 U
Carbazole	330	10 U
Di-n-butylphthalate	330	1 BJ
Fluoranthene	330	10 U
Pyrene	330	10 U
Butylbenzylphthalate	330	10 U
3,3'-Dichlorobenzidine	330	10 U
Benzo[a]anthracene	330	10 U
Chrysene	330	10 U
bis(2-Ethylhexyl)phthalate	330	2 BJ
Di-n-octylphthalate	330	10 C
Benzo[b]fluoranthene	330	10 O
Benzo[k]fluoranthene	330	10 U
Benzo[a]pyrene	330	10 U
Indeno[1,2,3-cd]pyrene	330	10 U
Dibenz[a,h]anthracene	330	10 n
Benzofg,h,i]perylene	330	10 U
Total TIC concentration		18
Units (ug/kg) Soil, (ug/L) Water	ug/kg	
Dilution Factor		-
Sample Weight/Volume		1000 mL
% Moisture		100

Inorganics					
Site		∞	∞	œ	~
Location			SB8	SB8	) & S
Sample Depth			9.5-10.5	4.5-5.5	0.5-2.5
Sample Number		8-RB1	8-SB8-9.5-10.5	8-SB8-4 5-5.5	8-SB8-0 5-2 S
Laboratory Sample ID		9604771-01	9604771-06	9604771-08	9604771-07
Matrix		water	lios	lios	ios
Date Sampled		4/25/96	4/25/96	4/25/96	4/25/96
Date Analyzed		5/7-14/96	5/7-14/96	\$/7-14/96	\$6/2-1
	CRDL				
Antimony	9 *	s UW	0.87 UJ	U 16:0	111 98 0
Arsenic	10	1 U	3.5	4	10.5
Barium	200	4 U	160	89.5	981
Beryllium	*	0.3 U	0.45 J	0.29 J	0.62 J
Cadmium	\$	2 U	0.36 U	0.32 U	0.48 J
Chromium	10	N 9	10.7	7.4	13.2
Copper	25	4 U	12.7	11.4	34
Lead	3	1 U	7.4	6.5	15
Mercury	0.2	0.2 U	U 70.0	0.11 U	0.11.0
Nickel	40	5 U	8.5	6	12.5
Selenium	٠,	1 U	0.17 UJ	0.18 UJ	m 98'0
Silver	10	3 U	0.54 U	0.48 U	0.54 11
Thallium	* 2	2 U	0.42	0.36 U	0.35 U
Zinc	20	12.7 B	53.9	42.3	683
Units (mg/kg) Soil, (ug/L) Water	ng/L				
% Solids			92.6	91.6	876
* Project-specific CRDL				)	)

Inorganics	•				
Site		∞	∞	∞	•••
Location		SB7	SB7	SB7	SB6
Sample Depth		8.9-10.3	4.5-5.8	0.5-2.5	9.5-10.3
Sample Number		8-SB7-8.9-10.3	8-SB7-4.5-5.8	8-SB7-0.5-2.5	8-SB6-9.5-10.3
Laboratory Sample ID		9604771-02	9604771-03	9604771-04	9604771-09
Matrix		lios	soil	soil	soil
Date Sampled		4/25/96	4/25/96	4/25/96	4/25/96
Date Analyzed		5/7-14/96	5/7-14/96	5/7-14/96	5/7-14/96
	CRDL				
Antimony	9 *	0.85 UJ	tu 98.0	0.81 UJ	UN 4.01
Arsenic	10	3.3	2.5	7.6	. 3.3
Barium	200	141	96.1	436	128
Beryllium	* 4	0.43 J	0.29 J	0.45 J	0.3 J
Cadmium	80	0.34 U	0.38 U	0.35 U	0.32 U
Chromium	10	13.2	8.3	12.1	12.7
Copper	25	13.3	10	26.7	11.1
Lead	8	7.7	6.2	16.6	7.9
Mercury	0.2	0.1 U	0.11 U	0.1 U	0.11 U
Nickel	40	9.1	8.8	10.6	11
Selenium	2	0.37 J	0.17 UJ	0.16 UJ	0.28 J
Silver	10	0.51 U	0.58 U	0.52 U	0.48 U
Thallium	* 2	0.34 U	0.34 U	0.33 U	0.35 U
Zinc	20	55.3	41.7	137	44.8
Units (mg/kg) Soil, (ug/L) Water	ng/L				
% Solids		92.2	91.4	9.68	91.7
* Project-specific CRDL					

Inorganics					
Site		∞	∞	9	4
Location		SB6	SB6	SB18	SB18
Sample Depth		4.5-5.7	0.5-2.4	8-8.3	6.4-7.3
Sample Number		8-SB6-4.5-5.7	8-SB6-0.5-2.4	6-SB18-8-8.3	6-SB18-6.4-7.3
Laboratory Sample ID		9604771-10	9604771-11	9604798-03	9604798-02
Matrix		lios	lios	lios	lios
Date Sampled		4/25/96	4/25/96	4/26/96	4/26/96
Date Analyzed		5/7-14/96	5/7-14/96	5/7-14/96	5/7-14/96
	CRDL				
Antimony	9 *	tD 68:0	0.83 UJ	0.92 UJ	1 111
Arsenic	10	2.5	8.6	3.7	5.7
Barium	200	78.3	358	306	248
Beryllium	*	0.26 J	0.52 J	0.24 J	0.27 J
Cadmium	s,	0.37 U	0.33 U	0.36 U	0.38 U
Chromium	10	7.8	15.3	12.9	8.6
Copper	25	11	37.4	9.6	32.7
Lead	е	5.9	8.1	5.1	6.9
Mercury	0.2	0.11 U	0.08 U	0.11 U	U 70:0
Nickel	40	8.6	11.9	8.9	8.7
Selenium	5	0.18 UJ	0.83 UJ	0.18 UJ	0.21 UJ
Silver	10	0.56 U	0.49 U	0.55 U	. 0.57 U
Thallium	* 2	0.35 U	0.33 U	0.37 U	0.41 U
Zinc	20	47.5	52.7	33.2	52.3
Units (mg/kg) Soil, (ug/L) Water %. Solide	T/8n	3			
* Project-specific CRDL		16	91.1	9.06	92.9
	•				

Inorganics					
Site		9	9	9	9
Location		SB18	SB15	SB15	SB15
Sample Depth		0.5-2.5	7.7-8.1	2.5-4	0.5-2.5
Sample Number		6-SB18-0.5-2.5	6-SB15-7.7-8.1	6-SB15-2.5-4	6-SB15-0.5-2.5
Laboratory Sample ID		9604798-01	9604798-06	9604798-05	9604798-04
Matrix	-	lios	lios	lios	lios
Date Sampled		4/26/96	4/26/96	4/26/96	4/26/96
Date Analyzed		5/7-14/96	5/7-14/96	5/7-14/96	5/7-14/96
	CRDL				
Antimony	9 *	0.88 UJ	0.85 UJ	tD 6.0	0.95 UJ
Arsenic	10	5.9	5.2 J	2.7	5.4
Barium	200	258	145	116	468
Beryllium	*	0.46 J	0.23 J	0.25 J	0.28 J
Cadmium	s	0.37 U	0.35 U	0.36 U	0.38 U
Chromium	10	10.5	111	7 U	11.3
Copper	25	16.9	6.6	13.7	17.1
Lead	æ	8.7	\$	6.3	5.8
Mercury	0.2	0.11	0.1 U	0.11 U	0.11 U
Nickel	40	11.3	8.4	8.2	6.8
Selenium	8	0.18 UJ	0.17 UJ	0.18 UJ	0.19 UJ
Silver	10	0.55 U	0.53 U	0.54 U	0.56 U
Thallium	* 2	0.42	0.34 U	0.36 U	0.38 U
Zinc	20	49.4	40.2	47.9	36.6
Units (mg/kg) Soil, (ug/L) Water	ng/L				
% Solids		90.3	92.2	91.3	89.5
* Project-specific CRDL					

JP4, Gas, Diesel, Oil					
Site		∞	∞	∞	∞
Location			SB8	SB8	SB8
Sample Depth			9.5-10.5	4.5-5.5	0.5-2.5
Sample Number	-	8-RB1	8-SB8-9.5-10.5	8-SB8-4.5-5.5	8-SB8-0.5-2.5
Laboratory Sample ID		9604771-01	9604771-06	9604771-08	9604771-07
Matrix		water	lios	lios	lios
Date Sampled		4/25/96	4/25/96	4/25/96	4/25/96
Date Analyzed		5/8-10/96	96/6-L/5	96/6-9/\$	9/6-9/5
	* RL				
JP-4	10	0.25 U	240	11 U	11 0
Gasoline range	'n	0.25 U	340	5.4 U	5.7 U
Diesel range, as diesel	10	0.25 U	260 NJ	11 U	חוו
Oil range, as oil	100	1 U	1200	110 U	110 U
Units (mg/kg) Soil, (mg/L) Water	mg/kg				
% Moisture		100	7	•	12
* RL - Reporting Limit					!

JP4, Gas, Diesel, Oil	٠				
Site		∞	∞	œ	∞
Location		SB7	SB7	SB7	SB6
Sample Depth		8.9-10.3	4.5-5.8	0.5-2.5	9.5-10.3
Sample Number		8-SB7-8.9-10.3	8-SB7-4.5-5.8	8-SB7-0.5-2.5	8-SB6-9.5-10.3
Laboratory Sample ID		9604771-02	9604771-03	9604771-04	9604771-09
Matrix		lios	lios	lios	soil
Date Sampled		4/25/96	4/25/96	4/25/96	4/25/96
Date Analyzed		9/8-9/5	9/6-9/5	96/4-2/9	96/6-9/\$
	* RL		:		
JP-4	10	11 U	11 U	11 U	11 U
Gasoline range	٠,	5.4 U	5.5 U	5.6 U	5.4 U
Diesel range, as diesel	10	11 U	11 U	55 NJ	11 U
Oil range, as oil	100	110 U	110 U	1700	110 U
Units (mg/kg) Soil, (mg/L) Water	mg/kg				
% Moisture		∞	6	10	∞
* RL - Reporting Limit					

	_				
		∞	<b>∞</b>	9	9
Location		SB6	SB6	SB18	SB18
Sample Depth		4.5-5.7	0.5-2.4	8-83	64-73
Sample Number		8-SB6-4.5-5.7	8-SB6-0.5-2.4	6-SB18-8-83	6-SB18-6 4-7 3
Laboratory Sample ID		9604771-10	9604771-11	9604798-03	9604798-02
Matrix		soil	lios	lico.	1700
Date Sampled		4/25/96	4/25/96	4/26/96	10S 10S 76/9C/P
Date Analyzed		96/6-9/\$	5/7-9/96	5/7-9/96	36/0 <b>1</b> -2/5
	* RL				0001-100
	10	11 U	11 U	92	05
Gasoline range	8	5.5 U	1 5.5	011	06
Diesel range, as diesel	10	11 U	IN SI		07
Oil range, as oil	100	110 U	180	11 011	11011
Units (mg/kg) Soil, (mg/L) Water	mg/kg				
% Moisture		6	6	o	•
* RI Renorting Limit				`	,

Volatile Organic Compounds						
Site		7	7	7	9	9
Location						•
Sample Depth						
Sample Number		7-TB3	7-TB2	7-RB1	6-TB3	6-TB2
Laboratory Sample ID		9604821-02	9604821-11	9604821-01	9604821-13	9604799-05
Matrix		water	water	water	water	water
Date Sampled		4/29/96	4/27/96	4/29/96	4/28/96	4/26/96
Date Analyzed	t	\$/2/96	9/2/5	96/7/5	9/2/5	9/1/96
Objection	CKQL 10	101	11 01	10.11	11 01	11 01
Vinvl Chloride	9 0	11 01 11 01	D 01	1 01	0 01	D 01
Bromomethane	2 01	1 Ot	0.01	U 01	101	11 01
Chloroethane	2 2	11 01	11 01	1011	1101	101
1 1-Dichloroethene	2 2	11 01	11 01	11 01	1101	1011
Acetone	. 2	10 U	2 3	7 3	) <del>-</del>	4 1
Carbon Disulfide	01	10 01	D 01	10 U	10 U	10 U
Methylene Chloride	10	77	1 J	10 U	10 U	1 5
1.1-Dichloroethane	10	10 U	10 U	10 U	10 U	10 U
2-Butanone	10	10 U	10 U	10 U	10 U	10 U
Chloroform	10	10 U	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	10	10 U	10 U	10 U	10 U	10 U
Carbon Tetrachloride	10	10 U	10 U	10 U	10 U	10 U
Benzene	10	10 U	10 U	10 U	10 U	10 OI
1,2-Dichloroethane	10	10 U	10 U	10 U	10 U	10 U
Trichloroethene	91	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	10	10 U	10 U	10 U	10 O	10 U
cis-1,3-Dichloropropene	01	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	10	10 U	10 U	10 O.	10 U	10 U
Toluene	10	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	01	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	10	10 U	10 U	10 U	10 U	10 U
2-Hexanone	01	10 U	10 U	10 U	10 U	10 U
Dibromochloromethane	10	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	10	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	01	10 U	10 U	10 U	10 U	10 U
Styrene	01	10 U	10 U	10 U	10 U	10 U
Bromoform	10	10 U	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	01	10 U	10 U	10 OI	10 U	10 U
1,2-Dichloroethene (total)	10	10 U	10 U	10 C	10 U	10 U
Xylene (total)	10	10 U	10 U	10 U	10 U	10 U
Total TIC concentration		0	0	13	0	0
Units (ug/kg) Soil, (ug/L) water						
Dilution Factor			1	-	1	1
Sample Weight/Volume		5.0 mL	5.0 mL	5.0 mL	5.0 mL	5.0 mL
% Moisture	_	100	100	100	100	100

Volatile Organic Compounds						
Site		9	7	7	7	7
Location	•		SB7	SB7	SB7	SB7
Sample Depth			8-8.3	3.4-5.2	3.4-5.2	3.4-5.2
Sample Number		6-RB1	7-SB7-8-8.3	7-SB7-3.4-5.2DL	7-SB7-3 4-5 2	7-SB7-3 4-\$ 2
Laboratory Sample ID		9604799-01	9604821-08	9604821-07DL	9604821-07	9604821-07
Matrix		water	soil	lios	soil	Eos
Date Sampled		4/26/96	4/27/96	4/27/96	4/21/96	4/27/96
Date Analyzed		5/1/96	5/2/96	96/L/5	5/3/96	Composite results
	CRQL					
Chloromethane	10	10 U	1400 U	1400 U	11 UJ	11 UJ
Vinyl Chloride	10	10 U	1400 U	1400 U	11 U	0.11
Bromomethane	10	10 U	1400 U	1400 U	11 UJ	n 11
Chloroethane	10	10 U	1400 U	1400 U	11 U	n 11
1,1-Dichloroethene	10	10 U	1400 U	1400 U	11 U	0 II
Acetone	10	8 J	1700	1800	900 J	1800
Carbon Disulfide	10	10 U	1400 U	1400 U	11 U	D 11
Methylene Chloride	10	1.1	1400 U	1400 U	11 U	O II
1,1-Dichloroethane	10	10 U	1400 U	1400 U	11 U	011
2-Butanone	10	10 U	1400 U	1400 U	I, S	) F
Chloroform	10	2 J	1400 U	1400 U	n II	11 11
1,1,1-Trichloroethane	10	10 U	1400 U	1400 U	0.11	9 11
Carbon Tetrachloride	10	10 U	1400 U	1400 U	D II	0 11
Benzene	10	10 U	1400 U	1400 U	חוו	011
1,2-Dichloroethane	10	10 U	1400 U	1400 U	ם וו	î ::
Trichloroethene	10	10 U	1400 U	1400 U		11 11
1,2-Dichloropropane	10	10 U	1400 U	1400 U	11 U	011
Bromodichloromethane	10	10 U	1400 U	1400 U	11 U	U 11
cis-1,3-Dichloropropene	10	10 U	1400 U	1400 U	11 U	D 11
4-Methyl-2-Pentanone	10	10 U	1400 U	1400 U	11 U	11 U
Toluene	10	2.J	140 J	1400 U	11 U	11 U
trans-1,3-Dichloropropene	01	10 U	1400 U	1400 U	11 U	11 U
1,1,2-Trichloroethane		10 U	1400 U	1400 U	n n	11 U
Tetrachloroethene	10	10 U	1400 U	1400 U	11 U	11 U
2-Hexanone	10	10 U	1400 U	1400 U	11 U	11 U
Dibromochloromethane	- 01	10 U	1400 U	1400 U	11 U	11 U
Chlorobenzene	10	10 U	1400 U	1400 U	11 U	11 U
Ethylbenzene	10	10 U	180 J	1400 U	11 U	11 U
Styrene	10	10 U	1400 U	1400 U	11 U	11 U
Bromoform	10	10 U	1400 U	1400 U	11 U	11 U
1,1,2,2-Tetrachloroethane	10	10 U	1400 U	1400 U	11 U	11 U
1,2-Dichloroethene (total)	10	10 U	1400 U	1400 U	11 U	11 U
Xylene (total)	10	10 U	1500	1400 U	11 U	11 U
Total TIC concentration		0	31090	0	٥	1
Units (ug/kg) Soil, (ug/L) water						
Dilution Factor		1	1	1	1	
Sample Weight/Volume		5.0 mL	4.0 g (Medium level)	4.0 g (Medium level)	5.0 g Cc	Composite results
% Moisture	_	100	∞	6	6	6

Page 2

Volatile Organic Compounds						
Site		7	7	7	7	7
Location	SB7	37	SB7	SB7	SB6	SB6
Sample Depth	7-SB7-1-3	-3	7-SB7-1-3	7-SB7-1-3	7.2-8	3.5-5.5
Sample Number	7-SB7-1-3DL	7	7-SB7-1-3	7-SB7-1-3	7-SB6-7.2-8	7-SB6-3.5-5.5
Laboratory Sample ID	9604821-06DL	J.	9604821-06	9604821-06	9604821-05	9604821-04
Matrix	35	soil	soil	lios	soil	soil
Date Sampled	4/21/96	96	4/21/96	4/21/96	4/27/96	4/27/96
Date Analyzed	96/1/9	96	96/8/9	Composite results	9/7/5	\$/3/96
Chloromethane 10		1600 U	12 UJ	12 UJ	1600 U	11 UJ
	16	1600 U	12 U	12 U	1600 U	11 U
	16	1600 U	12 UJ	12 UJ	U 0091	11 03
	16	1600 U	12 U	12 U	1600 U	11 U
thene	166	1600 U	12 U	12 U	1600 U	11 U
	140	1400 J	1200 J	1400 J	1400 J	130
Carbon Disulfide 10	16	1600 U	2 J	2 J	1600 U	11 U.
Methylene Chloride 10	16	1600 U	12 U	12 U	1600 U	11 U
1.1-Dichloroethane 10	16	1600 U	12 U	12 U	1600 U	11 U
2-Butanone 10	16	1600 U	12 J	12 J	1600 U	5 J
Chloroform 10	16	1600 U	12 U	12 U	1600 U	1.3
1,1,1-Trichloroethane 10	16	1600 U	12 U	12 U	1600 U	11 U
Carbon Tetrachloride 10	16	1600 U	12 U	12 U	1600 U	11 U
Benzene 10	16	1600 U	12 U	12 U	1600 U	11 U
1,2-Dichloroethane 10	16	1600 U	12 U	12 U	1600 U	11 U
Trichloroethene 10	16	1600 U	12 U	12 U	1600 U	U 11
pane		1600 U	12 U	12 U	1600 U	11 U
Bromodichloromethane 10		1600 U	12 U	12 U	1600 U	) II
cis-1,3-Dichloropropene 10	16	1600 U	12 U	12 U	1600 U	11 U
4-Methyl-2-Pentanone	16	1600 U	12 U	12 U	1600 U	O II
Toluene 10	91	1600 U	12 U	12 U	1100 J	
trans-1,3-Dichloropropene 10	16	1600 U	12 U	12 U	1600 U	D II
	91	1600 U	12 U	12 U	1600 U	D 11
Tetrachloroethene 10	16	1600 U	12 U	12 U	1600 U	O II
2-Hexanone 10		1600 U	12 U	12 U	1600 U	11 0
Dibromochloromethane 10		1600 U	12 U	12 U	1600 U	0 11
Chlorobenzene 10		1600 U	12 U	12 U	1600 U	0 11 ::
Ethylbenzene 10		1600 U	12 U	12 U	500 7	0 11
Styrene 10		1600 U	12 U	12 U	1600 U	0 11 0
Bromoform 10		1600 U	12 U	12 U	1600 U	0 11
1,1,2,2-Tetrachloroethane 10		1600 U	12 U	12 U	1600 U	0 11
1,2-Dichloroethene (total) 10		1600 U	12 U	12 U	1600 U	0.11
Xylene (total) 10		1600 U	12 U	12 U	3300	11 U
Total TIC concentration		0	91		76500	7
Units (ug/kg) Soil, (ug/L) water					•	•
Dilution Factor	:	<b></b> 1	-	•	- : : : : : : : : : : : : : : : : : : :	1 ;
Sample Weight/Volume	4.0 g (Medium level)	(j)	5.0g	Composite results	4.0 g (Medium level)	<b>50</b> 0.0
% Moisture		20	20	70	77	10

Volatile Organic Compounds						
Site		7	7	7	7	7
Location		SB6	SB6	SB6	DWI	. Md
Sample Depth		0-2	0-2	0-2	3.2-4.2	3,2,4,2
Sample Number		7-SB6-0-2DL	7-SB6-0-2	7-SB6-0-2	7-DW1-3 2-4 2DI	7-DW1-3 2.4 2
Laboratory Sample ID		9604821-03DL	9604821-03	9604821-03	9604821-10DL	9604821-10
Matrix		soil	lios	ios	lios	1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Date Sampled		4/27/96	4/27/96	4/27/96	4/77/4	106 20/LC/V
Date Analyzed		5/1/96	5/3/96	Composite results	96/L/5	30/E/S
	CRQL					0000
Chloromethane	10	1400 U	11 UJ	11 UJ	1400 U	11 111
Vinyl Chloride	10	1400 U	11 U	11 U	1400 U	
Bromomethane	<u>0</u>	1400 U	11 UJ	11 UJ	1400 U	
Chloroethane	10	1400 U	11 U	11 U	1400 U	
1,1-Dichloroethene	01	1400 U	11 U	11 U	1400 U	
Acetone	01	810 J	460 J	810 J	820 J	f 009
Carbon Disulfide	01	1400 U	11 U	11 U	1400 U	r T
Methylene Chloride	- 10	1400 U	11 U	11 U	1400 U	0 II
1, 1-Dichloroethane	10	1400 U	11 U	11 U	1400 U	n H
2-Butanone	10	1400 U	6 J	6 J	1400 U	15
Chloroform	10	1400 U	11 U	11 U	1400 U	-
1,1,1-Trichloroethane	9	1400 U	11 U	11 U	1400 U	
Carbon Tetrachloride	01	1400 U	11 U	11 U	1400 U	
Benzene	10	1400 U	11 U	11 U	1400 U	9 11 11
1,2-Dichloroethane	10	1400 U	11 U	11 U	1400 U	
Trichloroethene	01	1400 U	11 U	11 U	1400 U	2:1
1,2-Dichloropropane	10	1400 U	11 U	11 U	1400 U	
Bromodichloromethane	10	1400 U	11 U	U 11	1400 U	n H
cis-1,3-Dichloropropene	- 01	1400 U	11 0	11 U	1400 U	0.11
4-Methyl-2-Pentanone	10	1400 U	11 U	11 U	1400 U	61
Toluene	01	1400 U	11 U	11 U	1400 U	D 11
trans-1,3-Dichloropropene	10	1400 U	11 U	11 U	1400 U	11 U
1,1,2-1 richloroethane	- 01	1400 U	11 U	11 U	1400 U	11 U
I etrachloroethene	10	1400 U	11 U	11 U	1400 U	11 U
z-Hexanone	- 10	1400 U	1 J	1 J	1400 U	7 J
Dibromochloromethane	10	1400 U	11 U	11 U	1400 U	11 U
Chlorobenzene	10	1400 U	11 U	11 U	1400 U	11 U
Eunylbenzene	0 1	1400 U	11 U	11 U	1400 U	11 U
Styrene	- 10	1400 U	11 U	11 U	1400 U	11 U
Bromotorm	9	1400 U	11 U	11 U	1400 U	11 U
1, 1, 2, 2-1 etrachloroethane	2	1400 U	11 U	11 U	1400 U	11 U
1,2-Dichloroethene (total)	10	1400 U	11 U	11 U	1400 U	11 U
Xylene (total)	- 01	1400 U	11 U	11 U	1400 U	11 U
I otal ITC concentration		0	6		0	30
Units (ug/kg) Soil, (ug/L) water Diluion Footon		•				
Sample Weight/Volume		I A O a O dedition leads			1	1
% Moisture		TO & (ivicumin rever)	3.0g	Composite results	4.0 g (Medium level)	5.0 g
	-	?	71	71	13	13

Volatile Organic Compounds					•	,
Site		7	7	7	7	9
Location	DWI	WI	DW1	DWI	DW1	SB17
Sample Depth	3.2-4.2	4.2	1.2-3.2	1.2-3.2	1.2-3.2	9.5-9.9
Sample Number	7-DW1-3.2-4.2	4.2	7-DW1-1.2-3.2DL	7-DW1-1.2-3.2	7-DW1-1.2-3.2	6-SB17-9.5-9.9
Laboratory Sample ID	9604821-10	-10	9604821-09DL	9604821-09	9604821-09	9604799-04
Matrix		· lios	soil	soil	soil	lios
Date Sampled	4/21/96	96/	4/27/96	4/27/96	4/27/96	4/26/96
Date Analyzed	Composite results	ults	96/L/S	96/9/5	Composite results	5/2/96
Chloromethane 10		11 UJ	1500 U	12 U	12 U	1300 U
		11 U	1500 U	12 U	12 U	1300 U
		11 UJ	1500 U	12 U	12 U	. 1300 U
		11 U	1500 U	12 U	12 U	1300 U
thone		11 U	1500 U	12 U	12 U	1300 U
		820 J	820 J	S90 J	820 J	1300 U
Sisulfide		1 J	1500 U	12 U	12 U	1300 U
-		11 U	1500 U	12 U	12 U	1300 U
		11 U	1500 U	12 U	12 U	1300 U
		15	1500 U	2 J	2 J	1300 U
Chloroform		1 J	1500 U	12 U	12 U	1300 U
oroethane		11 U	1500 U	12 U	12 U	1300 U
		11 U	1500 U	12 U	12 U	1300 U
		11 U	1500 U	12 U	12 U	1300 U
oroethane		11 U	1500 U	12 U	12 U	1300 U
		11 U	1500 U	12 U	12 U	1300 U
nane.		11 U	1500 U	12 U	12 U	1300 U
ne		11 U	1500 U	12 U	12 U	1300 U
		11 U	1500 U	12 U	12 U	1300 U
		19	1500 U	12 U	12 U	1300 U
Toluene 10		11 U	1500 U	12 U	12 U	5100
-Dichloropropene		11 U	1500 U	12 U	12 U	1300 U
		11 U	1500 U	12 U	12 U	1300 U
Tetrachloroethene 10		11 U	1500 U	12 U	12 U	1300 U
		7 3	1500 U	12 U	12 U	1300 U
Dibromochloromethane 10		11 U	1500 U	12 U	12 U	1300 U
Chlorobenzene 10		11 U	1500 U	12 U	12 U	1300 U
		11 U	1500 U	12 U	12 U	1200 J
Styrene 10		11 U	1500 U	12 U	12 U	1300 U
Bromoform 10		11 U	1500 U	12 U	12 U	1300 U
1,1,2,2-Tetrachloroethane 10		11 U	1500 U	12 U	12 U	1300 U
1.2-Dichloroethene (total)		11 U	1500 U	12 U	12 U	1300 U
		11 U	1500 U	12 U	12 U	8100
Total TIC concentration			0	23		1406000
Units (ug/kg) Soil, (ug/L) water				,		•
Dilution Factor			1			
Sample Weight/Volume	Composite results		4.0 g (Medium level)	5.0 g	Composite results	4.0 g (Medium level)
% Moisture		13	18	18	13	•

Sample Depth	6 SB17 0.5-2.5 6-SB17-0.5-2.5 9604799-02 soil 4/26/96 5/7/96 1300 U 1300 U
SB17 4.5-5.8 6-SB17-4.5-5.8 9604799-03 soil 4/26/96 Soil 4/26/96 5/2/96 CRQL 10 10 10 10 10 1400 U	SB17 0.5-2.5 9604799-02 soil 4/26/96 5/7/96 1300 U
4.5-5.8 6-SB17-4,5-5.8 9604799-03 soil 4/26/96 soil 4/26/96 5/2/96 CRQL 10 10 10 10 10 1400 U	0.5-2.5 9604799-02 soil 4/26/96 5/7/96 1300 U
6-SB17-4,5-5.8 9604799-03 soil 4/26/96 Soil 4/26/96 5/2/96 CRQL 10 10 10 10 10 1400 U	5-SB17-0.5-2.5 9604799-02 soil 4/26/96 5/7/96 1300 U 1300 U
CRQL 10 10 10 10 10 10 10 10 10 10 10 10 10	9604799-02 soil 4/26/96 5/7/96 1300 U 1300 U
CRQL 10 10 10 10 10 10 10 10 10 10 10 10 10	soil 4/26/96 5/7/96 1300 U 1300 U
CRQL 10 10 10 10 10 10 10 10 10 10 10 10 10	4/26/96 5/7/96 1300 U 1300 U
CRQL 10 10 10 10 10 10 10 10 10 10 10 10 10	5/7/96 1300 U 1300 U
CROL 10 10 10 10 10 10 10 10 10 10 10 10 10	1300 U 1300 U
0 1 1 0 1 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 0 1 0	1300 U 1300 U
10 10 10 10 10 10 10 10 10 10 10	1300 U
10 10 10 10 10 10 10 10 10 10	
10 10 10 10 10 10 10 10 10 10	1300 U
10 10 10 10 10 10 10 10 10	130011
10 10 10 10 10 10 10 10 10	130011
10 10 10 10 10 10 10 10	13.00.1
10 10 10 10 10 10 10 10	1300 11
10 10 10 10 10 10 10 10	130011
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0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 000
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	O 000:1
0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.061
0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1300 U
10 10 10 10 10	1300 U
10 10 10 10	1300 U
10 10 10	1300 U
10 10 10	1300 U
10	1300 U
101	1300 U
	1300 U
L2-Pentanone	1300 U
	19000
ene	1300 U
1,1,2-Trichloroethane 10 1400 U	1300 U
thene	1300 U
	1300 U
Dibromochloromethane 10 1400 U	1300 U
Chlorobenzene 10 1400 U	1300 U
Ethylbenzene 10 640 J	3600
Styrene 10 1400 U	1300 17
10	1300 11
1,1,2,2-Tetrachloroethane	11 000 1
10	2000
- 01	, oth
centration	ODOS O
Trivous.	0,0277
Ollution Factor	
ht/Volume 4.0 g (Medium level)	4.0 g (Medium level)
	· vc

Low Level Volatile Organic Compounds	
Site	9
Location	DW1
Sample Depth	
Sample Number	6-DW1-W1
Laboratory Sample ID	9604821-12
Matrix	water
Date Sampled	4/28/96
Date Analyzed	5/10/96
CRQL	
chloromethane	50 UJ
vinyl chloride	Ω 0 Ω
bromomethane	50 U
chloroethane	30 U
1,1-dichloroethene	30 U
acetone	∝
carbon disulfide 1	50 U
methylene chloride 2	23 J
trans-1,2-Dichloroethene	20 U
1,1-dichloroethane	50 U
cis-1,2-Dichloroethene	50 U
2-butanone 5	22
bromochloromethane 1	50 U
chloroform 1	19 J
1,2-Dichloroethane	50 U
1,1,1-trichloroethane	50 U
carbon tetrachloride	50 U
benzene 1	20 U
trichloroethene 1	06
1,2-dichloropropane	50 U
bromodichloromethane 1	50 U
cis-1,3-dichloropropene	50 U
4-methyl-2-pentanone	250 U
toluene	220
trans-1,3-dichloropropene	50 U
1,1,2-trichloroethane	50 U
tetrachloroethene 1	n 0s
2-hexanone 5	5.5 J
dibromochloromethane 1	n 0s
1,2-dibromoethane	50 U
chlorobenzene	20 U
ethylbenzene 1	7.5 J
styrene	50 U
1,1,2,2-Tetrachloroethane	20 U

9	DW1		6-DW1-W1	9604821-12	water	4/28/96	5/10/96		50 U	50 U	50 U	50 U	50 U	52	6100		50	25 mL
	Location	Sample Depth	Sample Number	Laboratory Sample ID	Matrix	Date Sampled	Date Analyzed	CRQL	bromoform 1	1,3-dichlorobenzene	1,4-dichlorobenzene	1,2-dichlorobenzene	1,2-dibromo-3-chloropropane	Xylene (total)	Total TIC concentration	Units (ug/kg) Soil, (ug/L) Water ug/L		Sample Weight/Volume

						` '
Semivolatile Organic Compounds	_	1	v	v	1	> r
oile		•	ò	ה היות היות	CB2	SB7
Location				7 8 7	, ag	/gs
Sample Depth					8-8.3	3.4-5.2
Sample Number		7-RB1	6-RB1	6-DW1-W1	7-SB7-8-8.3	7-SB7-3.4-5.2
Laboratory Sample ID		9604821-01	9604799-01	9604821-12	9604821-08	9604821-07
Matrix		water	water	water	soil	soil
Date Sampled		4/29/96	4/26/96	4/28/96	4/27/96	4/21/96
Date Analyzed		5/10/96	96/8/5	5/22/96	96/6/\$	96/6/5
	CRQL					
bis(2-Chloroethyl)ether	330	10 U	10 U	200 U	720 U	370 U
Phenol	330	10 U	10 U	200 U	720 U	370 U
2-Chlorophenol	330	10 U	10 U	200 U	720 U	370 U
1.3-Dichlorobenzene	330	10 U	10 U	200 U	720 U	370 U
1.4-Dichlorohenzene	330	10 U	10 U	200 U	720 U	370 U
1 2-Dichlorobenzene	330	10 U	10 U	200 U	720 U	370 U
2 2'-oxyhis(1-chloropropane)	330	10 U	. 10 U	200 U	720 U	370 U
2-Methylphenol	330	10 U	10 U	200 U	720 U	370 U
Hexachloroethane	330	D 01	10 U	200 U	720 U	370 U
N-Nitroso-di-n-propylamine	330	10 U	10 U	200 U	720 U	370 U
4-Methylphenol	330	10 U	10 U	74 J	720 U	370 U
Nitrobenzene	330	D 01	10 U	200 U	720 U	370 U
Isonhorone	330	D 01	10 U	200 U	720 U	370 U
2-Nitrophenol	330	D 01	10 U	200 U	720 U	370 U
2 4-Dimethylphenol	330	n 61	U 01	200 U	720 U	370 U
L, 4-Duncary process	330	11 01	D 01	200 U	720 U	370 U
OB(2-Cinorochem)	330	11 01	10 OI	200 U	720 U	370 U
1.2 A. Tricklorobenzene	330	11 01	10 OI	200 U	720 U	370 U
1,2,4 Titilior Ovariant	330	11 01	D 01	200 U	2300	370 U
1 - Chlomonition	330	11 01	10 OI	200 U	720 U	370 U
Hevachlorohutadiene	330	U 01	10 U	200 U	720 U	370 U
4_Chloro-3-methylphenol	330	N 01	10 U	200 U	720 U	370 U
2-Methylnarhthalene	330	D 01	10 U	48 J	3700	370 U
Heyachlorocyclonentadiene	330	10 U	10 U	200 U	720 U	370 U
2.4.6-Trichlorophenol	330	10 U	10 U	200 U	720 U	370 U
2.4.5-Trichlorophenol	800	25 U	25 U	200 U	1800 U	920 U
2-Chloronaphthalene	330	10 U	10 U	200 U	720 U	370 U
2-Nitroaniline	800	25 U	25 U	200 U	1800 U	920 U
Acenaphthylene	330	10 U	10 U	200 U	720 U	370 U
Dimethylphthalate	330	10 U	10 U	200 U	720 U	370 U
2.6-Dinitrotoluene	330	10 U	10 U	200 U	720 U	370 U
Acenanhthene	330	10 U	10 U	200 U	720 U	370 U
3-Nitroaniline	800	25 U	25 U	200 U	1800 U	920 U
2.4-Dinitrophenol	800	25 U	25 U	200 U	1800 U	920 U
Dibenzofuran	330	10 U	10 U.	200 U	720 U	370 U
2.4-Dinitrotoluene	330	10 U	10 U	200 U	720 U	370 U
4-Nitrophenol	800	25 U	25 U	200 U	1800 U	920 U
Fliorene	330	10 U	10 U	200 U	63 J	370 U
	-					

Semivolatile Organic Compounds						
Site		7	9	9	>	<u> </u>
Location				DW1	SB7	, 3
Sample Depth				i : 	8-83	38.
Sample Number		7-RB1	6-RB1	6-DW1-W1	7.8B7.8-8	2.4-3.2 7-SB7.2 4 6.0
Laboratory Sample ID		9604821-01	9604799-01	9604821-12	9604821-08	9604821-07
Matrix		water	water	water	lios	
Date Sampled		4/29/96	4/26/96	4/28/96	96/17/4	HOS 40/7/7/
Date Analyzed		5/10/96	96/8/5	96/22/5	90/0/\$	20/0/3
	CRQL			2	06/6/6	96/6/6
4-Chlorophenyl-phenylether	330	10 U	10 U	200 U	720 13	370 11
Diethylphthalate	330	10 U	10 U	200 U	720 U	370 11
4-Nitroaniline	008	25 U	25 U	500 U	U 0081	050
4,6-Dinitro-2-methylphenol	008	25 U	25 U	200 U	1800 U	920 U
n-Nitrosodiphenylamine	330	10 U	10 U	200 U	720 U	370 U
4-Bromophenyl-phenylether	330	10 U	10 U	200 U	720 U	370 U
Hexachlorobenzene	330	10 U	10 U	200 U	720 U	370 U
Pentachlorophenol	008	25 U	25 U	500 U	1800 U	920 U
Phenanthrene	330	10 U	10 U	200 U	J 071	370 U
Anthracene	330	10 U	10 U	200 U	720 U	370 U
Carbazole	330	10 U	10 U	200 U	720 U	370 U
Di-n-butylphthalate	330	10 U	1 BJ	30 J	720 U	370 U
Fluoranthene	330	10 U	10 U	200 U	720 U	370 U
Fyrene	330	10 U	10 U	200 U	720 U	370 U
Butylbenzylphthalate	330	1.1	10 U	35 J	720 U	370 U
3,3'-Dichlorobenzidine	330	10 U	10 U	200 UJ	720 U	370 U
Benzo[a]anthracene	330	10 U	10 U	200 U	720 U	370 U
Chrysene	330	10 U	10 U	200 U	720 U	370 U
bis(2-Ethylhexyl)phthalate	330	21 B	2 BJ	140 J	200 J	140 J
Di-n-octyphthalate	330	2 J	10 U	200 U	720 U	370 U
Benzo[b]Illuoranthene	330	10 U	10 U	200 U	720 U	370 U
Benzol K Jiluoranthene	330	10 U	10 U	200 U	720 U	370 U
Benzola Jpyrene	330	10 U	10 U	200 U	720 U	370 U
Indeno[1,2,3-cd]pyrene	330	10 U	10 U	200 U	720 U	370 U
Unbenz[a,h]anthracene	330	10 U	10 U	200 U	720 U	370 U
Benzolg, h, 1]perylene	330	10 U	10 U	200 U	720 U	370 U
Total TIC concentration		18	20	15960	63740	1014
Units (ug/kg) Soil, (ug/L) Water	ng/kg					
Dilution Factor		1	1	20	2	
Sample Weight Volume		1000 mL	1000 mL	1000 mL	30.0g	30.0 g
% Moisture	_	100	100	100	∞	6

Semivolatile Organic Compounds						
Site	_	7	7	7	7	7
Location		SB7	SB6	SB6	SB6	DW1
Sample Depth		7-SB7-1-3	7.2-8	3.5-5.5	0-2	3.2-4.2
Sample Number		7-SB7-1-3	7-SB6-7.2-8	7-SB6-3.5-5.5	7-SB6-0-2	7-DW1-3.2-4.2
Laboratory Sample ID		9604821-06	9604821-05	9604821-04	9604821-03	9604821-10
Matrix		soil	soil	soil	ios	ios
Date Sampled		4/27/96	4/27/96	4/27/96	4/27/96	4/27/96
Date Analyzed		96/6/5	96/6/5	96/6/9	96/6/5	5/21/96
	CROL				11 () 8	11 (55
bis(2-Chloroethyl)ether	330	420 U	840 U	370 U	760 0	00//
Phenol	330	420 U	840 U	370 U	760 U	770 U
2-Chlorophenol	330	420 U	840 U	370 U	D 094	770 U
1,3-Dichlorobenzene	330	420 U	840 U	370 U	160 U	770 U
1,4-Dichlorobenzene	330	420 U	840 U	370 U	760 U	770 U
1,2-Dichlorobenzene	330	420 U	840 U	370 U	760 U	770 U
2.2'-oxybis(1-chloropropane)	330	420 U	840 U	370 U	760 U	770 U
2-Methylphenol	330	420 U	840 U	370 U	160 U	U 077
Hexachloroethane	330	420 U	840 U	370 U	760 U	J 077
N-Nitroso-di-n-propylamine	330	420 U	840 U	370 U	160 U	J 077
4-Methylphenol	330	420 U	840 U	370 U	160 U	J 077
Nitrohenzene	330	420 U	840 U	370 U	160 U	770 U
Isonhorone	330	420 U	840 U	370 U	U 097	J 077
2-Nitronhemol	330	420 U	840 U	370 U	760 U	770 U
2.4-Dimethylphenol	330	420 U	840 U	370 U	760 U	J 077
his/2-Chloroethoxy)methane	330	420 U	840 U	370 U	760 U	J 077
2.4-Dichlorophenol	330	420 U	840 U	370 U	760 U	U 077
1.2.4-Trichlorobenzene	330	420 U	840 U	370 U	760 U	J 077
Naphthalene	330	420 U	1800	370 U	760 U	16 J
4-Chloroanilire	330	420 U	840 U	370 U	760 U	J 077
Hexachlorobutadiene	330	420 U	840 U	370 U	760 U	770 U
4-Chloro-3-methylphenol	330	420 U	840 U	370 U	760 U	J 077
2-Methylnaphthalene	330	420 U	3800	370 U	760 U	1 61
Hexachlorocyclopentadiene	330	420 U	840 U	370 U	160 U	770 U
2,4,6-Trichlorophenol	330	420 U	840 U	370 U	760 U	770 U
2,4,5-Trichlorophenol	800	1000 U	2100 U	930 U	1900 U	1900 U
2-Chloronaphthalene	330	420 U	840 U	370 U	760 U	U 077
2-Nitroaniline	800	1000 U	2100 U	930 U	1900 U	1900 U
Acenaphthylene	330	420 U	840 U	370 U	. U 097	770 U
Dimethylphthalate	330	420 U	840 U	370 U	760 U	770 U
2.6-Dinitrotoluene	330	420 U	840 U	370 U	160 U	U 077
Acenaphthene	330	420 U	840 U	370 U	160 U	770 U
3-Nitroaniline	800	1000 U	2100 U	930 U	1900 U	1900 U
2.4-Dinitrophenol	800	1000 U	2100 U	930 U	D 0061	1900 U
Dibenzofuran	330	420 U	840 U	370 U	160 U	770 U
2,4-Dinitrotoluene	330	420 U	840 U	370 U	760 U	770 U
4-Nitrophenol	800	1000 U	2100 U	930 U	1900 U	1900 U
Fluorene	330	420 U	f 09	370 U	760 U	770 U

Semivolatile Organic Commounds						
Site	_	r	t	ı		
Location		-	,	7	7	7
Second Dark		SB7	SB6	SB6	SB6	DW1
Sample Depth		7-SB7-1-3	7.2-8	3.5-5.5	0-2	3.2-4.2
Sample Number		7-SB7-1-3	7-SB6-7.2-8	7-SB6-3.5-5.5	7-SB6-0-2	7-DW1-3.2-4.2
Laboratory Sample ID		9604821-06	9604821-05	9604821-04	9604821-03	9604821-10
Matrix		soil	soil	soil	lios	lios
Date Sampled		4/27/96	4/27/96	4/27/96	4/27/96	4/27/96
Date Analyzed		96/6/5	96/6/\$	96/6/\$	96/6/5	5/21/96
	CRQL					
4-Chlorophenyl-phenylether	330	420 U	840 U	370 U	O 09Z	770 11
Diethylphthalate	330	420 U	840 U	370 U	U 097	11 022
4-Nitroaniline	008	1000 U	2100 U	930 U	U 0061	14 0061
4,6-Dinitro-2-methylphenol	008	1000 U	2100 U	930 U	D 0061	11 0061
n-Nitrosodiphenylamine	330	420 U	840 U	370 U	760 11	2201
4-Bromophenyl-phenylether	330	420 U	840 U	370 U	11 092	11 022
Hexachlorobenzene	330	420 U	840 U	370 U	0 09Z	11 022
Pentachlorophenol	008	1000 U	2100 U	930 U	1900 U	11 0061
Phenanthrene	330	420 U	140 J	370 U	760 U	12.1
Anthracene	330	420 U	840 U	370 U	U 097	11 022
Carbazole	330	420 U	840 U	370 U	760 U	11 022
Di-n-butylphthalate	330	420 U	840 U	370 U	D 092	11 022
Fluoranthene	330	420 U	840 U	370 U	760 U	171
Pyrene	330	420 U	840 U	370 U	D 092	I 61
Butylbenzylphthalate	330	420 U	840 U	370 U	760 U	11 022
3,3'-Dichlorobenzidine	330	420 U	840 U	370 U	760 U	11 022
Benzo[a]anthracene	330	420 U	840 U	370 U	109L	11 022
Chrysene	330	420 U	840 U	370 U	760 U	11 022
bis(2-Ethylhexyl)phthalate	330	130 J	840 U	370 U	760 U	920
Di-n-octylphthalate	330	420 U	840 U	370 U	760 U	43 J
Benzo[b]fluoranthene	330	420 U	840 U	370 U	760 U	770 U
Benzo[k]tluoranthene	330	420 U	840 U	370 U	760 U	U 077
Benzo[a]pyrene	330	420 U	840 U	370 U	760 U	U 077
Indeno[1,2,3-cd]pyrene	330	420 U	840 U	370 U	760 U	770 U
Dibenz[a,h]anthracene	330	420 U	840 U	370 U	760 U	J 077
Benzolg, h, 1]perylene	330	420 U	840 U	370 U	160 U	U 077
Total TIC concentration		2507	55330	406	160	3360
Units (ug/kg) Soil, (ug/L) Water	ng/kg					
Dilution Factor	_	-	7	-	2	2
Sample Weight/Volume		30.0 g	30.0 g	30.0g	30.0 g	30.0 g
% Moisture		20	21	10	12	13

Semivolatile Organic Compounds	-					
Site		7	9	9	9	
Location		DW1	SB17	SB17	SB17	
Sample Depth		1.2-3.2	9.5-9.9	4.5-5.8	0.5-2.5	
Sample Number	7-DW	7-DW1-1.2-3.2	6-SB17-9.5-9.9	6-SB17-4.5-5.8	6-SB17-0.5-2.5	
Laboratory Sample ID	8	9604821-09	9604799-04	9604799-03	9604799-02	
Matrix		soil	soil	lios	soil	
Date Sampled		4/27/96	4/26/96	4/26/96	4/26/96	
Date Analyzed		96/6/5	96/8/5	5/10/96	96/8/5	
CRQL	QL .					
bis(2-Chloroethyl)ether 330	0,	410 U	360 U	3700 U	350 U	
Phenol 330	-0	410 U	360 U	3700 U	350 U	
2-Chlorophenol	<u> </u>	410 U	360 U	3700 U	350 U	
1,3-Dichlorobenzene 330		410 U	360 U	3700 U	350 U	
1,4-Dichlorobenzene 330	0	410 U	360 U	3700 U	350 U	
1,2-Dichlorobenzene 330	0.	410 U	360 U	3700 U	350 U	
2,2'-oxybis(1-chloropropane) 330	0,	410 U	360 U	3700 U	350 U	
2-Methylphenol 330	0	410 U	360 U	3700 U	350 U	
Hexachloroethane 330	0	410 U	360 U	3700 U	350 U	
N-Nitroso-di-n-propylamine 330	0	410 U	360 U	3700 U	350 U	
4-Methylphenol 330	- 0	410 U	360 U	3700 U	350 U	
	0	410 U	360 U	3700 U	350 U	
	9	410 U	360 U	3700 U	350 U	
lot	9	410 U	360 U	3700 U	350 U	
henol	9	410 U	360 U	3700 U	350 U	
methane	9	410 U	360 U	3700 U	350 U	
	0.	410 U	360 U	3700 U	350 U	
1,2,4-Trichlorobenzene 330	- 9	410 U	360 U	3700 U	350 U	
Naphthalene 330	- 0	410 U	2000	13000	420	
4-Chloroaniline 330	0.	410 U	360 U	3700 U	350 U	
diene	9	410 U	360 U	3700 U	350 U	
enol	0.	410 U	360 U	3700 U	350 U	
	- 01	410 U	1300	12000	110 J	
Hexachlorocyclopentadiene 330	9	410 U	360 U	3700 U	350 U	
2,4,6-Trichlorophenol 330	0	410 U	360 U	3700 U	350 U	
2,4,5-Trichlorophenol	2	1000 U	D 006	9200 U	N 068	
2-Chloronaphthalene 330	9	410 U	, n 09E	3700 U	350 U	
2-Nitroaniline 800	9	1000 U	D 006	9200 U	Ω 068	
Acenaphthylene 330	01	410 U	360 U	3700 U	350 U	
Dimethylphthalate 330		410 U	360 U	3700 U	350 U	
	330	410 U	360 U	3700 U	350 U	
	330	410 U	360 U	3700 U	350 U	
	008	1000 U	000 U	9200 U	n 068	
loue	008	1000 U	O 006	9200 U	n 068	
	330	410 U	360 U	3700 U	350 U	
2,4-Dinitrotoluene 330	2	410 U	360 U	3700 U	350 U	
	008	1000 U	D 006	9200 U	n 068	
	330	410 U	360 U	3700 U	350 U	

Semivolatile Organic Compounds						
Site		7	9	v	<b>Y</b>	
Location	.,,	DW1	SB17	SB17	SB17	
Sample Depth		1.2-3.2	9.5-9.9	4.5-5.8	0.5-2.5	
Sample Number		7-DW1-1.2-3.2	6-SB17-9.5-9.9	6-SB17-4.5-5.8	6-SB17-0.5-2.5	
Laboratory Sample ID		9604821-09	9604799-04	9604799-03	9604799-02	
Matrix		ios	soil	lios	ios	
Date Sampled		4/27/96	4/26/96	4/26/96	4/26/96	
Date Analyzed		96/6/\$	96/8/5	96/01/\$	96/8/5	
	CKOL					
4-Chlorophenyl-phenylether	330	410 U	360 U	3700 U	350 U	
Diethylphthalate	330	410 U	360 U	3700 U	350 U	
4-Nitroaniline	800	1000 U	, n 006	9200 U	Ω 068	
4,6-Dinitro-2-methylphenol	800	1000 U	D 006	9200 U	Ω 068	
n-Nitrosodiphenylamine	330	410 U	360 U	3700 U	350 11	
4-Bromophenyl-phenylether	330	410 U	360 U	3700 U	350 11	
Hexachlorobenzene	330	410 U	360 U	3700 U	350 U	
Pentachlorophenol	800	1000 U	D 006	9200 U	N 068	
Phenanthrene	330	410 U	360 U	3700 U	350 U	
Anthracene	330	410 U	360 U	3700 U	350 U	
Carbazole	330	410 U	360 U	3700 U	350 U	
Di-n-butylphthalate	330	410 U	120 J	3700 U	350 U	
Fluoranthene	330	410 U	360 U	3700 U	350 U	
Pyrene	330	410 U	360 U	3700 U	350 U	
Butylbenzylphthalate	330	410 U	360 U	3700 U	350 U	
3,3'-Dichlorobenzidine	330	410 U	360 UJ	3700 UJ	350 UJ	
Benzo[a]anthracene	330	410 U	360 U	3700 U	350 U	
Chrysene	330	410 U	360 U	3700 U	350 U	
bis(2-Ethylhexyl)phthalate	330	410 U	160 J	1200 J	350 U	
Di-n-octylphthalate	330	410 U	360 U	3700 U	350 U	
Benzo[b]fluoranthene	330	410 U	360 U	3700 U	350 U	
Benzo[k]fluoranthene	330	410 U	360 U	3700 U	350 U	
Benzo[a]pyrene	330	410 U	360 U	3700 U	350 U	
Indeno[1,2,3-cd]pyrene	330	410 U	360 U	3700 U	350 U	
Dibenz[a,h]anthracene	330	410 U	360 U	3700 U	350 U	
Benzo[g,h,i]perylene	330	410 U	360 U	3700 U	350 U	
Total TIC concentration		3362	52160	1018000	103610	
Units (ug/kg) Soil, (ug/L) Water Dilution Factor	ng/kg	•	,			i
Duuton Factor Samule Weight Wohime		I 000	1	10	1	
Sample weignt volume % Moisture		30.0g	30.0g	30.0 g	30.0 g	
A INTERIOR OF	_	10	,	6	9	

Inorganics	-				ı
Site		7	9	9	7
Location					SB7
Sample Depth					8-8.3
Sample Number		7-RB1	6-RB1	6-DW1-W1	7-SB7-8-8.3
Laboratory Sample ID		9604821-01	9604799-01	9604821-12	9604821-08
Matrix		water	water	water	lios
Date Sampled		4/29/96	4/26/96	4/28/96	4/27/96
Date Analyzed		5/8-13/97	5/8-13/97	5/8-13/97	5/8-13/97
	CRDL				
Antimony	9 *	5 U	5 U	44.5	1.1 U
Arsenic	10	1 U	10	13.2 U	3.4 U
Barium	200	4 U	4 U	578	729
Beryllium	* 4	0.3 U	0.3 U	0.3 U	0.3 U
Cadmium	٠,	2 U	2 U	268	0.43 U
Chromium	10	0.9	0.9	945	10.9
Copper	25	4 U	4 U	1640	13.3
Lead	3	1 U	1 U	1280	9.2
Mercury	0.7	0.2 U	0.2 U	2.4	0.11 U
Nickel	4	S U	5 U	1040	12.1
Selenium	S	U I	10	1 UI	0.18 UJ
Silver	10	3 U	3 U	6.3 J	0.65 U
Thallium	*2	2 U	3.5	2.1 J	0.36 U
Zinc	20	12.3 B	8.6 B	1730	37
Units (mg/kg) Soil, (ug/L) Water	T/Bn				1
% Solids					91.8
<ul> <li>Project-specific CRDL</li> </ul>					

	7	SB6 SB6	er.	7-SB6-7.2-8 7-SB6-3.5-5.5		•	1108 1108 20/17/4			12.11													11 ZEO D 2000		
r	_	SB7	7-SB7-1-3	7-SB7-1-3	9604821-06	lios	4/27/96	5/8-13/97		1.1 U	6.6	292	11 050	0.02	0.44 U	17.5	13.9	9.3	0.12 U	16.1	0.18 UJ	0.66 U	0.37 U	43.5	80.2
,		SB7	3.4-5.2	7-SB7-3.4-5.2	9604821-07	lios	4/27/96	5/8-13/97	4	0.91 U	2.9 U	122	03111	11 150	0.3/ 0	6.3	10.5	5.8	0.11 U	9.3	0.17 UJ	0.55 U	0.34 U	41.5	91.2
_									CRDL	9 *	10	200	*	•	<b>n</b>	10	25	3	0.2	40	~	10	*2	20	7/8n
Inorganics Site	Location	Location	Sample Depth	Sample Number	Laboratory Sample ID	Matrix	Date Sampled	Date Analyzed		Antimony	Arsenic	Barium	Beryllium	Cadmin		Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc	Units (mg/kg) Soil, (ug/L) Water % Solids * Project-specific CRDL

Inorganics	•				
Site		7	7	7	9
Location		SB6	DW1	DW1	SB17
Sample Depth		0-2	3.2-4.2	1.2-3.2	9.5-9.9
Sample Number		7-SB6-0-2	7-DW1-3.2-4.2	7-DW1-1.2-3.2	6-SB17-9.5-9.9
Laboratory Sample ID		9604821-03	9604821-10	9604821-09	9604799-04
Matrix		lios	lios	soil	lios
Date Sampled		4/27/96	4/27/96	4/27/96	4/26/96
Date Analyzed		5/8-13/97	5/8-13/97	5/8-13/97	5/8-13/97
	CRDL				
Antimony	9 *	1.1 U	1 U	1.1 U	1.1 U
Arsenic	10	O 6.9	7.5 U	0.8 U	U 6.8
Barium	200	181	229	239	119
Beryllium	*	0.33 U	0.53 U	0.71 U	0.28 U
Cadmium	s	0.44 U	0.41 U	0.44 U	0.43 U
Chromium	10	10.7	13.1	19.3	7.8
Copper	25	19.7	15.1	18.9	15.3
Lead	3	7.5	9.4	8.5	5.9
Mercury	0.2	0.08 U	0.11	0.11 U	0.11 U
Nickel	40	10.9	13.5	16.2	11.9
Selenium	5	0.16 UJ	U 61.0	US 101	0.17 UJ
Silver	10	0.65 U	0.61 U	0.66 U	0.64 U
Thallium	*2	0.32 U	0.38 U	0.35 U	0.34
Zinc	20	45.8	50.8	45.7	38.7
Units (mg/kg) Soil, (ug/L) Water	T/8n				
% Solids		88.4	87.4	81.6	92.5
* Project-specific CRDL					

Inorganics Site		9	9	
		SB17	SB17	
		4.5-5.8	0.5-2.5	
Sample Number		6-SB17-4.5-5.8	6-SB17-0.5-2.5	
Laboratory Sample ID		9604799-03	9604799-02	
		soil	lios	
		4/26/96	4/26/96	
Date Analyzed		5/8-13/97	5/8-13/97	
	CRDL			
	9 *	U 62.0	1 U	
	10	2.2 U	4.1 U	
	200	186	444	
	*	0.3 U	0.28 U	
	5	0.32 U	0.41 U	
	10	7.1	9.2	
	25	13.4	10.7	
		8.8	4.4	
	0.2	O 60:0	0.1	
	40	8.2	9.4	
	s	0.19 UJ	0.18 UJ	
	10	0.48 U	0.61 U	
	*2	0.37 U	0.35 U	
	20	38.9	32.8	
Units (mg/kg) Soil, (ug/L) Water	ng/L			
		91.2	94	
* Project-specific CRDL				

JP4, Gas, Diesel, Oil	•				1
Site		٢	9	9	7
Location					SB7
Samula Denth					8-8.3
Sampo Depui		7-RB1	6-RB1	6-DW1-W1	7-SB7-8-8.3
I aboutour Comple ID		9604821-01	9604799-01	9604821-12	9604821-08
Laboratory Sample 1D					
Matrix		water	water	Water	lios
Date Sampled	•	4/29/96	4/26/96	4/28/96	4/27/96
Date Analyzed		5/8-10/96	\$/10/96	5/9-10/96	5/9-13/96
	* RL				
IP-4	10	0.25 U	NA	150	950
Diesel range, as diesel	10	0.25 U	NA	82	008
Oil range, as oil	100	1 U	NA	78	8400
Gasoline range	\$	0.25 U	0.25 U	59 NJ	IV 0071
Units (mg/kg) Soil, (mg/L) Water % Moisture * Reporting Limit	mg/kg	100	100	100	••

Site		7	7	7	9
Location		SB6	DW1	DW1	SB17
Sample Depth		0-2	3.2-4.2	1.2-3.2	9.5-9.9
Sample Number		7-SB6-0-2	7-DW1-3.2-4.2	7-DW1-1.2-3.2	6-SB17-9.5-9.9
Laboratory Sample ID		9604821-03	9604821-10	9604821-09	9604799-04
Matrix		lios	lios	lios	lios
Date Sampled		4/27/96	4/27/96	4/27/96	4/26/96
Date Analyzed		5/9-13/96	5/8-13/96	5/8-13/96	5/9-13/96
	* RL				
JP-4	10	11 U	11 U	12 U	2600
Diesel range, as diesel	10	11 U	13	12 U	069
Oil range, as oil	100	110 U	140	120 U	1100
Gasoline range	\$	5.7 U	5.7 U	6.1 U	2900 NJ
Units (mg/kg) Soil, (mg/L) Water % Moisture	mg/kg	12	13	18	8
* Reporting Limit					

9	SB17	0.5-2.5	6-SB17-0.5-2.5	9604799-02	lios	4/26/96	5/10-13/96		1300	18 NJ	110 U	2600 NJ	9
9	SB17	4.5-5.8	6-SB17-4.5-5.8	9604799-03	lios	4/26/96	5/10-13/96		7800	2800	14000	17000 NJ	6
								* RL	10	10	100	s.	mg/kg
Site	Location	Sample Depth	Sample Number	Laboratory Sample ID	Matrix	Date Sampled	Date Analyzed		JP-4	Diesel range, as diesel	Oil range, as oil	Gasoline range	Units (mg/kg) Soil, (mg/L) Water % Moisture

Volatile Organic Compounds						
Site		<b>\$</b>	∞	<b>60</b> 0	7	00
Location						SB9
Sample Depth						8.5-9.4
Sample Number		8-TB4	8-TB3	8-RB2	7-TB1	8-SB9-8.5-9.4
Laboratory Sample ID		9605024-12	9605024-07	9605024-11	9604830-06	9605024-06
Matrix		water	water	water	water	soil
Date Sampled		4/30/96	. 4/30/96	4/30/96	4/27/96	4/30/96
Date Analyzed		96/8/5	96/8/5	96/8/5	9/7/9	96/9/5
	CRQL					
	10	10 0	10 0	0.01	D 0I	0 11
Vinyl Chloride	10	10 U	10 U	10 U	D 01	D 11
Bromomethane 1	01	10 U	10 U	10 U	10 U	11 U
Chloroethane	01	10 U	10 U	10 U	10 U	11 U
thene	01	10 U	10 U	10 U	10 U	11 U
	10	6 J	10 U	16	10 U	93
Carbon Disulfide	10	10 U	10 U	10 U	10 U	1.1
Methylene Chloride	- 01	1.1	1.1	10 U	10 U	11 U
1.1-Dichloroethane	- 01	10 U	10 U	10 U	10 U	11 U
2-Butanone	- 01	D 01	10 U	10 U	10 U	f 8
Chloroform	10	10 U	10 U	10 U	10 U	11 U
oroethane	- 01	D 01	10 U	10 U	10 U	11 U
	- 01	10 U	10 U	10 U	10 U	11 U
	- 0	10 U	10 U	10 01	10 U	11 U
oroethane	10	10 U	10 U	10 U	10 U	11 U
	- 01	10 U	10 U	10 U	10 U	11 U
Dane	91	) Of	10 U	10 U	10 U	11 U
90	10	10 U	10 U	10 U	10 U	11 U
	10	10 U	10 U	10 U	10 U	11 U
	10	10 U	10 U	10 OI	10 U	11 U
	01	10 U	10 U	10 U	10 U	1.5
trans-1,3-Dichloropropene	10	10 U	10 U	10 U	10 U	11 U
	10	10 U	10 U	10 U	10 U	11 U
	10	10 U	10 U	10 U	10 U	11 U
2-Hexanone	10	10 U	10 U	10 U	10 U	. 2 J
Dibromochloromethane	- 01	10 U	10 U	10 U	10 U	11 U
Chlorobenzene	10	10 U	10 U	10 U	10 U	11 U
	10	10 U	10 U	10 U	10 U	11 U
Styrene	10	10 U	10 U	10 U	10 U	11 U
Bromoform	10	10 U	10 U	10 U	10 U	11 U
1,1,2,2-Tetrachloroethane	10	10 U	10 U	10 U	10 U	11 U
	10	10 U	10 U	10 U	10 U	11 U
	10	10 U	10 U	10 U	10 U	11 U
Total TIC concentration		16	0	20	0	0
Units (ug/kg) Soil, (ug/L) Water						
Dilution Factor		_	#	1	1	1
Sample Weight/Volume		5.0 mL	5.0 mL	5.0 mL	5.0 mL	5.0 g
% Moisture		100	100	100	100	∞

Volatile Organic Compounds						
Site		∞	∞	86	∞	∞
Location		SB9	SB9	SB10	SB10	SB10
Sample Depth		4.5-5.5	8-SB9-1-3	6.6-6	4.5-6.5	4.5-6.5
Sample Number		8-SB9-4.5-5.5	8-SB9-1-3	8-SB10-9-9.9	8-SB10-4.5-6.5DL	8-SB10-4.5-6.5
Laboratory Sample ID		9605024-05	9605024-04	9605024-10	9605024-09DL	9605024-09
Matrix		ios	soil	soil	soil	lios
Date Sampled		4/30/96	4/30/96	4/30/96	4/30/96	4/30/96
Date Analyzed	_	96/9/5	2/3/96	96/9/\$	9/1/96	96/9/\$
	CRQL					
Chloromethane	10	11 U	11 U	11 U	1500 U	12 U
Vinyl Chloride	01	. 11 U	11 U	11 U	1500 U	12 U
Bromomethane	10	11.0	11 53	11 U	1500 U	12 U
Chloroethane	10	11 U	11 UJ	11 U	1500 U	12 U
1, 1-Dichloroethene	10	11 U	n n	11 U	1500 U	12 U
Acetone	10	82	28(B/	160	f 006	490 J
Carbon Disulfide	10	11 U	11 U	11 U	1500 U	12 U
Methylene Chloride	01	11 U	11 U	11 U	1500 U	12 U
1,1-Dichloroethane	01		11 U	11 U	1500 U	12 U
2-Butanone	10	11 U	4 J	10 J	1500 U	2 J
Chloroform	10	11 U	11 U	11 U	1500 U	12 U
1,1,1-Trichloroethane	- 01	11 U	11 U	11 U	1500 U	12 U
Carbon Tetrachloride	10	11 U	11 U	11 U	1500 U	12 U
Benzene	- 01	11 U	11 U	11 U	1500 U	12 U
1,2-Dichloroethane	- 01	11 U	11 U	11 U	1500 U	12 U
Trichloroethene	10	11 U	11 U	11 U	1500 U	12 U
1,2-Dichloropropane	10	D 11	11 U	11 U	1500 U	12 U
Bromodichloromethane	- 10		11 U	11 U	1500 U	12 U
cis-1,3-Dichloropropene	01	11 U	11 U		1500 U	12 U
4-Methyl-2-Pentanone	01	11 U	6 J	11 U	1500 U	12 U
Toluene	10	1.5	11 U	1 J	1500 U	1.1
trans-1,3-Dichloropropene	- 10		11 U	11 U	1500 U	12 U
1,1,2-1 richloroethane		11 U	11 U	11 U	1500 U	12 U
I etrachioroethene	0 :	11 U	11 U	11 U	1500 U	12 U
2-Hexanone	01		4 J	11 U	1500 U	12 U
Dibromochloromethane		11 U	11 U	11 U	1500 U	12 U
Chlorobenzene		11 U	11 U	11 U	1500 U	12 U
Ethylbenzene	- 01	11 U	11 U	11 U	1500 U	12 U
Styrene	10	11 U	11 U	11 U	1500 U	12 U
Bromoform	10	11 U	11 U	11 U	1500 U	12 U
1, 1, 2, 2-Tetrachloroethane	10		11 U	11 U	1500 U	12 U
1,2-Dichloroethene (total)	- 01	11 U	11 U	11 U	1500 U	12 U
Xylene (total)	- 01	1 1	11 U	1 J	1500 U	1.1
Total TIC concentration		21	14	27	0	14
Units (ug/kg) Soil, (ug/L) Water						
Dilution Factor		-	1		1	
Sample Weight/Volume		5.0 g	5.0g	5.0 g	4.0 g (Medium level)	5.0 g
70 Ivioisture	-	አ	71	<b>00</b>	18	18

	,					
Site		8	80	7	7	7
Location		SB10	SB10	SB5	SB5	· SB5
Sample Depth		4.5-6.5	1-3.	8-8.6	4.5-5.4	1-3.
Sample Number		8-SB10-4.5-6.5	8-SB10-1-3	7-SB5-8-8.6	7-SB5-4.5-5.4	7-SB5-1-3DL
Laboratory Sample ID		9605024-09	9605024-08	9604830-03	9604830-02	9604830-01DL
Matrix		soil	lios	lios	soil	lios
Date Sampled		4/30/96	4/30/96	4/27/96	4/27/96	4/21/96
		Composite result	96/9/5	9/2/36	96/7/9	96/6/5
Chloromethane	  -   2	12 U	11 U	1400 U	1400 U	U 88
	10	12 U	11 U	1400 U	1400 U	28 U
Bromomethane	10	12 U	11 U	1400 U	1400 U	n 85
Chloroethane	01	12 U	11 U	1400 U	1400 U	28 U
1,1-Dichloroethene	10	12 U	11 U	1400 U	1400 U	D 85
Acetone	10	1 006	210	1400 U	920 J	850 J
Carbon Disulfide	10	12 U	1.3	1400 U	1400 U	28 U
Methylene Chloride	01	12 U	11 U	1400 U	1400 U	26 J
1,1-Dichloroethane	10	12 U	11 U	1400 U	1400 U	D 88
2-Butanone	10	2 J	2 J	1400 U	1400 U	57 J
Chloroform	10	12 U	11 U	730 J	1400 U	28 U
1,1,1-Trichloroethane	2	12 U	11 U	1400 U	1400 U	28 U
Carbon Tetrachloride	10	12 U	11 U	1400 U	1400 U	28 U
Benzene	10	12 U	11 U	830 J	1400 U	5 J
1,2-Dichloroethane	10	12 U	11 U	1400 U	1400 U	D 85
Trichloroethene	10	12 U	11 U	1400 U	1400 U	4 J
1,2-Dichloropropane	10	12 U	11 U	1400 U	1400 U	28 U
Bromodichloromethane	10	12 U	11 U	1400 U	1400 U	58 U
cis-1,3-Dichloropropene	10	12 U	11 U	1400 U	1400 U	28 U
4-Methyl-2-Pentanone	10	12 U	11 U	1400 U	1400 U	58 U
Toluene	10	1 J	1.5	5700	1400 U	6 J
trans-1,3-Dichloropropene	10	12 U	11 U	1400 U	1400 U	28 U
1,1,2-Trichloroethane	10	12 U	. n 11	1400 U	1400 U	28 U
Tetrachloroethene	10	12 U	11 U	1400 U	1400 U	28 U
2-Hexanone	10	12 U	11 U	1400 U	1400 U	28 U
Dibromochloromethane	01	12 U	11 U	1400 U	1400 U	28 U
Chlorobenzene	10	12 U	11 U	1400 U	1400 U	28 U
Ethylbenzene	01	12 U	11 U	13000	190 J	28 U
Styrene	10	12 U	11 U	1400 U	1400 U	28 U
Bromoform	01	12 U	11 U	1400 U	1400 U	28 U
1,1,2,2-Tetrachloroethane	10	12 U	11 U	1400 U	1400 U	28 U
1,2-Dichloroethene (total)	10	12 U	11 U	1400 U	1400 U	O 85
Xylene (total)	01	1 J	11 U	80000	1600	4 J
Total TIC concentration	+		15	170000	29380	70
Units (ug/kg) Soil, (ug/L) Water						
Dilution Factor		i	-		- ;	1
Sample Weight/Volume		Composite result	5.0 g	4.0 g (Medium level)	4.0 g (Medium level)	1.08
% Moisture	_	18	10	∞	<b>x</b> 0	14

Volatile Organic Compounds	•					
Site		7	7	9	9	vo
Location		SB5	SB5	SB16	SB16	SB16
Sample Depth		1-3.	1-3.	8.5-9.5	3.9-4.5	68-60
Sample Number		7-SB5-1-3	7-SB5-1-3	6-SB16-8.5-9.5	6-SB16-3 9-4 5	6-8B16-0 0-3 0
Laboratory Sample ID		9604830-01	9604830-01	9605024-03	9605024-02	9605024-01
Matrix		ios	soil	lios	soil	Elos
Date Sampled		4/27/96	4/27/96	4/30/96	4/30/96	4/30/96
Date Analyzed	o.	96/9/\$	Composite result	2/2/96	9/3/96	2/3/96
Chloromethone	CKQL					
View Chlorida	0 0	12 U	12 U	1300 U	11 U	11 U
December 1	01 ;	12.0	12 U	1300 U	11 U	11 U
Dromometnane	0 ;	12 U	12 U	1300 U	11 UJ	11 UJ
Chloroethane	10	12 U	12 U	1300 U	11 UJ	11 UI
1,1-Dichloroethene	01	12 U	12 U	1300 U	11.0	11 U
Acetone	- 01	750 J	850 J	2000	140	130
Carbon Disulfide	10	12 U	12 U	1300 U	11 U	11.0
Methylene Chloride	- 01	12 U	12 U	1300 U	11 U	11 U
1,1-Dichloroethane	10	12 U	12 U	1300 U	11 U	
2-Butanone	10	8 J	Г 80	1300 U	1 6	) -, ec
Chloroform	10	12 U	12 U	1300 U	D 11	
1,1,1-Trichloroethane	10	12 U	12 U	1300 U	D 11	
Carbon Tetrachloride	10	12 U	12 U	1300 U	n II	
Benzene	10	12 U	12 U	1300 U	n II	
1,2-Dichloroethane	10	12 U	12 U	1300 U	D 11	
Trichloroethene	10	12 U	12 U	1300 U	0 II	
1,2-Dichloropropane	10	12 U	12 U	1300 U	) :: 11 U	
Bromodichloromethane	10	12 U	12 U	1300 U	U 11	
cis-1,3-Dichloropropene	10	12 U	12 U	1300 U	11 U	
4-Methyl-2-Pentanone	10	12 U	12 U	1300 U	11 U	
Toluene	10	2 J	2 J	1300 U	D 11	11 11
trans-1,3-Dichloropropene	10	12 U	12 U	1300 U	11 U	
1,1,2-Trichloroethane	01	12 U	12 U	1300 U	11 U	n II
Tetrachloroethene	10	12 U	12 U	1300 U	11 U	1111
2-Hexanone	10	12 U	12 U	1300 U	5 J	; s
Dibromochloromethane	10	12 U	12 U	1300 U	11 U	
Chlorobenzene	10	12 U	12 U	1300 U	11 U	11 0
Ethylbenzene	10	1 J	1.5	100 J	11 U	11 U
Styrene	10	12 U	12 U	1300 U	11 U	11 U
Bromoform	10	12 U	12 U	1300 U	11 U	11 U
1,1,2,2-Tetrachloroethane	10	12 U	12 U	1300 U	11 U	11 U
1,2-Dichloroethene (total)	10	12 U	12 U	1300 U	11 U	11 U
Xylene (total)	10	4 J	4 J	510 J	11 U	11 U
Total TIC concentration		127		38400	14	33
Units (ug/kg) Soil, (ug/L) Water						
Camala Waicht Woluma	<b>9</b> 14					
Sample weight volume % Moisture		5.0 g	Composite result	4.0 g (Medium level)	5.08	5.0 g
	-	<b>+</b>	14	•	5	12

DWI 1 DWI 1 DWI 4.14.6 (-DWI-4.14.6 (-DWI-4.				•		
DW1		ø	ø	o	ø	
CROW, 1,3,7,6   C-DW1-4,1-4.6   C-DW1-4,1-4.		DWI	DW1	DWI	DW1	
Comparison   Com		7.3-7.6	4.1-4.6	4.1-4.6	4.1-4.6	
Secretaria-Oscida		6-DW1-7.3-7.6	6-DW1-4.1-4.6DL	6-DW1-4.1-4.6	6-DW1-4.1-4.6	
CROL   Act		9604830-05	9604830-04DL	9604830-04	9604830-04	
CRQL  CRQL  10  10  1400 U  14		lios	lios	lios	soil	
10   1400 U   2700 UJ   1400 U   1400		4/21/96	4/21/96	4/27/96	4/27/96	
CRQL  10 1400 U		2/2/96	96/6/5	5/2/96	Composite result	
10	CROL				4	
10	10	1400 U	2700 UJ	1400 U	1400 U	
10	10	1400 U	2700 UJ	1400 U	1400 U	
10	0	1400 U	2700 UJ	1400 U	1400 U	
10	2 2	1400 11	111 0026	1400 11	1400 II	
10	2 5	1400 11	111 0022	1400 11	1400 17	
10	2 5	14001	111 0022	1400 11	1400 11	
10	91	0 0041	(O 90/7	0.00+1	0.00+1	
10	10	1400 U	2700 UJ	1400 U	1400 U	
100   1400 U   1400	01	. 1400 U	250 J	1400 U	1400 U	
10	10	1400 U	2700 UJ	1400 U	1400 U	
10	10	1400 U	2700 UJ	1400 U	1400 U	
10	10	1400 U	2700 UJ	1400 U	1400 U	
10	01	1400 11	2700 UJ	1400 U	1400 U	
10	01	1400 11	2700 UJ	1400 U	1400 U	
10	01	1400 11	2700 III	1400 1	1400 1	
10	01	1400 13	2700 UJ	1400 U	1400 U	
10   1400 U   2700 UJ   1400 U   1400	01	1400 11	230 J	280 J	280 J	
10	9	1400 U	2700 UJ	1400 U	1400 U	
10		1400 U	2700 UJ	1400 U	1400 U	
ne 10 1400 U 2700 UJ 1400 U 1400 U 15000 J 1400 U 15000 J 1400 U 1400 U 1700 UJ 1400 U 1400 U 1700 UJ 1700		1400 11	111 0022	1400 11	1400 11	
10		1400 11	111 002.2	1400 TI	1400 11	
10	01	4500	1 0003	1 00009	20005	
10 1400 U 2700 UJ 1400 U 1400 U 1400 U 1400 U 2700 UJ 1400 U 1400 U 1400 U 2700 UJ 1400 U 1400 U 1400 U 1400 U 1400 U 1400 U 2700 UJ 1400 U 1400 U 1400 U 2700 UJ 1400 U 2700 UJ 1400 U 1400 U 2700 UJ 1400 U 2700 UJ 1400 U 1400 U 2700 UJ 2700		110001	111 0026	1400 11	1400 11	
10		0 00+1	50 00/7 111 0020	0.001	2001	
10	10	1400 U	2/00 03	1400 0	1400 0	
10	10	1400 U	2700 UJ	1400 U	1400 U	
10         1400 U         2700 UJ         1400 U           10         1400 U         2700 UJ         1400 U           10         1900         5900 J         5400           10         1400 U         2700 UJ         1400 U           10         1400 U         2700 UJ         1400 U           10         1400 U         250 J         350 J           10         1400 U         250 J         350 J           10         1400 U         250 J         34000           213500         373000 J         148800           1         213500         393000         148800           1         2         2         2	10	1400 U	2700 UJ	1400 U	1400 U	
10         1400 U         2700 UJ         1400 U           10         1900         5900 J         5400           10         1400 U         2700 UJ         1400 U           10         1400 U         2700 UJ         1400 U           10         1400 U         250 J         350 J           10         1400 U         250 J         350 J           10         1400 U         37000 J         34000           213500         393000         148800           1         213500         393000         148800           1         2         2		1400 U	2700 UJ	1400 U	1400 U	
10         1900         5900 J         5400           10         1400 U         2700 UJ         1400 U           10         1400 U         2700 UJ         1400 U           10         1400 U         250 J         350 J           10         1400 U         250 J         350 J           10         1400 U         37000 J         34000           213500         393000         148800           1         1         2           2         1         4.0 (Medium level)         4.0 (Medium level)		1400 U	2700 UJ	1400 U	1400 U	
10         1400 U         2700 UJ         1400 U           10         1400 U         2700 UJ         1400 U           10         1400 U         2700 UJ         1400 U           10         1400 U         250 J         350 J           10         14000         37000 J         34000           213500         393000         148800           1         1         2           2         1         4.0 (Medium level)         4.0 (Medium level)	10	1900	5900 J	5400	5400	
10         1400 U         2700 UJ         1400 U           10         1400 U         2700 UJ         1400 U           10         1400 U         250 J         350 J           10         14000         37000 J         34000           213500         393000         148800           1         1         2           2         2         4.0 (Medium level)         4.0 (Medium level)	10	1400 U	2700 UJ	1400 U	1400 U	
10         1400 U         2700 UJ         1400 U           10         1400 U         250 J         350 J           10         14000         37000 J         34000           213500         393000         148800           1         2         1           2         2         4.0 (Medium level)         4.0 (Medium level)	10	1400 U	2700 UJ	1400 U	1400 U	
10 1400 U 250 J 350 J 37000 J 37000 J 34000 393000 148800 148800 1 4.0 (Medium level) 4.0 (Medium level) 4.0 (Medium level) Composite		1400 11	111 0026	1400 11	1400 11	
10 14000 37000 J 34000 3 34000 3 34000 1 148800 393000 148800 148800 1 1		14001	1 056	3401	3.50 1	
10 213500 393000 148800 34000 1 4.0 (Medium level) 4.0 (Medium level) Composite		00071	1 00000	2000	00016	
213500 393000 148800 1 2 1 4.0 (Medium level) 4.0 (Medium level) 4.0 (Medium level)		14000	C 000/S	24000	24000	
1 2 1 4.0 (Medium level) 4.0 (Medium level) 4.0 (Medium level)		213500	393000	148800		
4.0 (Medium level) 4.0 (Medium level) 4.0 (Medium level)	) Water	•	·	-		
4.0 (Medium level) 4.0 (Medium level) 4.0 (Medium level)		T .	7			
		4.0 (Medium level)	4.0 (Medium level)	4.0 (Medium level)	Composite result	

Semivolatile Organic Compounds	•					
Site		œ	∞	•	∞	<b>∞</b>
Location			SB9	SB9	SB9	SB10
Sample Depth			8.5-9.4	4.5-5.5	8-SB9-1-3	6.6-6
Sample Number		8-RB2	8-SB9-8.5-9.4	8-SB9-4.5-5.5	8-SB9-1-3	8-SB10-9-9.9
Laboratory Sample ID		9605024-11	9605024-06	9605024-05	9605024-04	9605024-10
Matrix		water	lios	lios	soil	lios
Date Sampled		4/30/96	4/30/96	4/30/96	4/30/96	4/30/96
Date Analyzed		9/16/96	5/15/96	2/15/96	5/15/96	9/19/9
his/7-Chlorashay/bathor	330 CRQL	10.11	360 11	370 U	380 U	360 U
Dhenol	330	10 U	0 09E	370 U	380 U	360 U
2-Chlorophenol	330	D 01	360 U	370 U	380 U	360 U
1 3-Dichlorohenzene	330	10 OI	360 U	370 U	380 U	340 U
1 4-Dichlorobenzene	330	10 OI	360 U	370 U	380 U	340 U
1.2-Dichlorobenzene	330	10 U	360 U	370 U	380 U	360 U
2.2'-oxybis(1-chloropropane)	330	10 U	360 U	370 U	380 U	360 U
2-Methylphenol	330	10 U	360 U	370 U	380 U	360 U
Hexachloroethane	330	10 U	360 U	370 U	380 U	360 U
N-Nitroso-di-n-propylamine	330	10 U	360 U	370 U	380 U	360 U
4-Methylphenol	330	10 U	360 U	370 U	380 U	360 U
Nitrobenzene	330	10 U	360 U	370 U	380 U	360 U
Isophorone	330	10 U	360 U	370 U	380 U	360 U
2-Nitrophenol	330	10 U	360 U	370 U	380 U	360 U
2,4-Dimethylphenol	330	10 U	360 U	370 U	380 U	360 U
bis(2-Chloroethoxy)methane	330	10 U	360 U	370 U	380 U	360 U
2,4-Dichlorophenol	330	10 U	360 U	370 U	380 U	360 U
1,2,4-Trichlorobenzene	330	10 U	360 U	370 U	380 U	360 U
Naphthalene	330	10 U	360 U	370 U	380 U	360 U
4-Chloroaniline	330	10 U	360 U	370 U	380 U	360 U
Hexachlorobutadiene	330	10 U	360 U	370 U	380 U	360 U
4-Chloro-3-methylphenol	330	10 U	360 U	370 U	380 U	360 U
2-Methylnaphthalene	330	10 U	360 U	370 U	380 U	360 U
Hexachlorocyclopentadiene	330	10 U	360 U	370 U	380 U	360 U
2,4,6-Trichlorophenol	330	10 U	360 U	370 U	380 U	360 U
2,4,5-Trichlorophenol	800	25 U	010 U	920 U	950 U	910 U
2-Chloronaphthalene	330	10 U	360 U	370 U	380 U	360 U
2-Nitroaniline	800	25 U	910 U	920 U	950 U	910 U
Acenaphthylene	330	10 U	360 U	370 U	380 U	360 U
Dimethylphthalate	330	10 OI	360 U	370 U	380 U	360 U
2,6-Dinitrotoluene	330	10 U	360 U	370 U	380 U	360 U
Acenaphthene	330	10 U	360 U	370 U	380 U	360 U
3-Nitroaniline	800	25 U	910 U	920 U	950 U	910 U
2,4-Dinitrophenol	800	25 U	910 U	920 U	950 U	910 U
Dibenzofuran	330	10 U	360 U	370 U	380 U	360 U
2.4-Dinitrotoluene	330	10 U	360 U	370 U	380 U	360 U
4-Nitrophenol	008	25 U	910 U	920 U	D 056	910 U
Hinrene	330	D 01	360 U	370 U	380 U	360 U
	-					

Semivolatile Organic Compounds						
Site		00	œ	or	o	c
Location			SB9	ŝ	ិ ជន ន	ю (ў
Sample Depth			8 5-9 4	4 5-5 5	90000	0.55
Sample Number		8-BB2	8-CBO-8 5-0 A	3 3 4 000 0	C-1-600-8	8.8-k
Laboratory Sample ID	-	9605024-11	9605024-06	04-5157-4.5-5.3	8-SB9-I-3	8-SB10-9-9.9
Matrix		11 12000	50-1-20000	50~+70C006	9605024-04	9605024-10
Date Campled		Water	los	ios	lios	ios
Date Americal		4/30/96	4/30/96	4/30/96	4/30/96	4/30/96
Date Attalyzeu	- IOa5	5/16/96	5/15/96	\$/15/96	5/15/96	9/91/5
4-Chlorophenvl-phenvlether	330	1011	11 052	14 040		
Diethylphthalate	330	1101	1 000	0.078	380 0	360 U
4-Nitroaniline	008	25.5	2000	370 U	380 U	360 U
4.6-Dinitro-2-methylphenol	008	0 57	0.016	0.026	950 U	910 U
n-Nitrosodinhenvlamine	330	9 62 11 01	0.016	0.026	950 U	910 U
4-Bromonhenvl-nhenvlether	330		360 U	370 U	380 U	360 U
Hexachlorobenzene	330	1 0I	0.000	3/0 0	380 0	360 U
Pentachloronhenol	000	2000	380 U	370 U	380 U	360 U
Dhomonthrone	936	0.62	910 U	920 U	050 U	010 U
r nenammene	330	10 U	360 U	370 U	380 U	360 U
Anthracene	330	10 U	360 U	370 U	380 U	360 U
Carbazole	330	10 U	360 U	370 U	380 U	360 U
Di-n-butylphthalate	330	10 U	360 U	370 U	380 U	360 U
Fluoranthene	330	10 U	360 U	370 U	380 U	360 U
Pyrene	330	10 U	360 U	370 U	380 U	360 U
Butylbenzylphthalate	330	10 U	360 U	370 U	380 U	0 09E
3,3'-Dichlorobenzidine	330	10 U	360 UJ	370 UJ	380 UJ	360 U
Benzo[a]anthracene	330	10 U	360 U	370 U	380 U	360 U
Chrysene	330	10 U	360 U	370 U	380 U	360 U
bis(2-Ethylhexyl)phthalate	330	4 BJ	360 U	190 J	200 J	360 U
Di-n-octylphthalate	330	1 J	360 U	14 J	6 J	360 U
Benzo[b]fluoranthene	330	10 U	360 U	370 U	380 U	360 U
Benzolk Illuoranthene	330	10 U	360 U	370 U	380 U	360 U
Benzo[a]pyrene	330	10 U	360 U	370 U	380 U	360 U
Indeno[1,2,3-cd]pyrene	330	10 U	360 U	370 U	380 U	360 U
Dibenz[a,h]anthracene	330	10 U	360 U	370 U	380 U	360 U
Benzolg, h, 1]perylene	330	10 U	360 U	370 U	380 U	360 U
I otal TIC concentration		14	709	1026	2722	099
Units (ug/kg) Soil, (ug/L) Water Dilution Eartor	ng/kg	-	•			
Samula Waintt (Aluma		I		1	1	1
Sample weight volume		1000 mL	30.0 g	30.0 g	30.0 g	30.0 g
70 Miciolato	-		×	6	12	•

Site         8           Location         Sample Depth           Sample Depth         4.5-6.5           Sample Number         4.5-6.5           Laboratory Sample ID         9605024-09           Matrix         8-SB10-4.5-6.5           Date Sampled         8-SB10-4.5-6.5           Date Analyzed         8-SI10-4.5-6.5           Phenol         330           1,3-Dichlorobenzene         330           1,2-Dichlorobenzene         330           2,2-oxybis(1-chloropropane)         330           330         330           4-Methylphenol         330           N-Nitrose-di-n-propylamine         330           330         340           340         340           340         340           340         340           340         340           340		8 SB10 1-3.	7 SB5 8-8.6	SBS 4.5-5.4	7 SB5
SS 4.5 8-SB10-4.5, 8-SB10-4.5, 9605024 9605024 9605024 9605024 973 930 9330 9330 9330 9330 9330 9330 9		SB10 1-3.	SB5 8-8.6	SB5 4.5-5.4	SBS
# 4.5 # 8-SB10-4.5 # 4/30 # 4/30 # 330 # 330		1-3.	8-8.6	4.5-5.4 7 CD\$ 4 6 6 4	
8-SB10-4.5.  CRQL  330 330 330 330 330 330 330 330 330 3				7 CD 6 4 6 6 4	1-3.
9605024  CRQL 330 330 330 330 330 330 330 330 330 33		8-SB10-1-3	7-SB5-8-8.6	+.CC.+.C.C/	7-SB5-1-3
4/30 CRQL 330 330 330 330 330 330 330 33	soil 4/30/96	9605024-08	9604830-03	9604830-02	9604830-01
A 4/30  CRQL 330 330 330 330 330 330 330 mine 330 330	4/30/96	soil	soil	soil	ios
CRQL 330 330 330 330 9ane) 330 mine 330	5/15/06	4/30/96	4/27/96	4/27/96	4/27/96
CRQL 330 330 330 330 330 330 mine 330	3/10/30	9/16/96	9/10/96	9/10/96	5/24/96
330 330 330 330 330 330 mine 330	360 11	370 11	1400 11	1400 11	390 11
100   100	360 11	370 11	1400 11	1400 17	3000
330 330 330 330 330 330	0 09E	370 U	1400 U	1400 U	300 n
330 330 330 330 330	0 09E	370 U	1400 U	1400 U	390 U
330 330 330 330 330	360 U	370 U	1400 U	1400 U	O 068
330 330 330 330 330	360 U	370 U	1400 U	1400 U	390 U
330 330 330 330 330	360 U	370 U	1400 U	1400 U	390 U
330 pylamine 330 330 330	360 U	370 U	1400 U	1400 U	390 U
930 330 330 330	360 U	370 U	1400 U	1400 U	390 U
330	360 U	370 U	1400 U	1400 U	390 U
330	360 U	370 U	1400 U	1400 U	390 U
230	360 U	370 U	1400 U	1400 U	330 N
OCC	360 U	370 U	1400 U	1400 U	390 U
	360 U	370 U	1400 U	1400 U	390 U
	360 U	370 U	1400 U	1400 U	390 U
methane 330	360 U	370 U	1400 U	1400 U	390 U
	360 U	370 U	1400 U	1400 U	390 U
robenzene 330	360 U	370 U	1400 U	1400 U	390 U
330	360 U	370 U	950 J	3300	7 J,
330	360 U	370 U	1400 U	1400 U	330 N
330	360 U	370 U	1400 U	1400 U	330 U
enol 330	360 U	370 U	1400 U	1400 U	390 U
330	360 U	370 U	1600	5100	4 3
diene 330	360 U	370 U	1400 U	1400 U	390 U
330	360 U	370 U	1400 U	1400 U	330 N
	910 U	930 U	3600 U	3600 U	O 070
	360 U	370 U	1400 U	1400 U	330 ft
	910 U	930 U	3600 U	3600 U	040 U
	360 U	370 U	1400 U	1400 U	390 U
	360 U	370 U	1400 U	1400 U	330 N
2,6-Dinitrotoluene 330 360	360 U	370 U	1400 U	1400 U	390 U
Acenaphthene 330 360	360 U	370 U	1400 U	1400 U	390 U
3-Nitroaniline 800 910	910 U	930 U	3600 U	3600 U	O 070
2,4-Dinitrophenol 800   910	910 U	930 U	3600 U	3600 U	O 070
	360 U	370 U	1400 U	1400 U	390 U
	360 U	370 U	1400 U	1400 U	390 U
4-Nitrophenol 800 910	910 U	930 U	3600 U	3600 U	O 070
330	360 U	370 U	58 J	39 J	390 U

Semivolatile Organic Compounds						
Site	_	00	٥	t	•	
Location		SB10	SB10	945		7
Sample Denth		Olde	SBIU	SBS	SBS	SB5
Sample Deput		4.3-6.3	1-3.	8-8.6	4.5-5.4	1-3.
Sample Number		8-SB10-4.5-6.5	8-SB10-1-3	7-SB5-8-8.6	7-SB5-4.5-5.4	7-SB5-1-3
Laboratory Sample ID	<del></del>	9605024-09	9605024-08	9604830-03	9604830-02	9604830-01
Matrix		soil	soil	soil	lios	lios
Date Sampled		4/30/96	4/30/96	4/27/96	4/27/96	4/27/96
Date Analyzed	_	9/19/5	\$/16/96	96/01/9	5/10/96	5/24/96
	CRQL					
4-Chlorophenyl-phenylether	330	360 U	370 U	1400 U	1400 U	390 U
Diethylphthalate	330	360 U	370 U	1400 U	1400 U	D 068
4-Nitroaniline	800	910 U	930 U	3600 U	3600 U	11 026
4,6-Dinitro-2-methylphenol	008	910 U	930 U	3600 U	3600 U	D 026
n-Nitrosodiphenylamine	330	360 U	370 U	1400 U	1400 U	11 068
4-Bromophenyl-phenylether	330	360 U	370 U	1400 U	1400 U	300 n
Hexachlorobenzene	330	360 U	370 U	1400 U	1400 U	390 U
Pentachlorophenol	008	910 U	930 U	3600 U	3600 U	D 026
Phenanthrene	330	360 U	370 U	93 J	1400 U	390 U
Anthracene	330	360 U	370 U	1400 U	1400 U	390 U
Carbazole	330	360 U	370 U	1400 U	1400 U	390 U
Di-n-butylphthalate	330	360 U	370 U	1400 U	1400 U	390 U
Fluoranthene	330	360 U	370 U	1400 U	1400 U	390 U
Pyrene	330	360 U	370 U	1400 U	1400 U	5 J
Butylbenzylphthalate	330	360 U	370 U	1400 U	1400 U	390 U
3,3'-Dichlorobenzidine	330	360 U	370 U	1400 UJ	1400 UJ	390 UJ
Benzo[a]anthracene	330	360 U	370 U	1400 U	1400 U	390 U
Chrysene	330	360 U	370 U	1400 U	1400 U	390 U
bis(2-Ethylhexyl)phthalate	330	360 U	370 U	1400 U	\$90 J	390 U
Di-n-octylphthalate	330	5 J.	370 U	1400 U	1400 U	390 U
Benzo[b]fluoranthene	330	360 U	370 U	1400 U	1400 U	390 U
Benzo[k]fluoranthene	330	360 U	370 U	1400 U	1400 U	390 U
Benzo[a]pyrene	330	360 U	370 U	1400 U	1400 U	390 U
Indeno[1,2,3-cd]pyrene	330	360 U	370 U	1400 U	1400 U	390 U
Dibenz[a,h]anthracene	330	360 U	370 U	1400 U	1400 U	390 U
Benzolg, h, 1 perylene	330	360 U	370 U	1400 U	1400 U	390 U
I otal TIC concentration		893	1006	60840	85400	7412
Units (ug/kg) Soil, (ug/L) Water Dilution Factor	ng/kg	-	-	~		•
Sample Weight/Volume		300%	3008	* 000	4	1
% Moisture		જા ∞ આ જ	30.00 10.00	80.0c	30.0g	30.0 g
	-	,	24	0	œ	14

Semivolatile Organic Compounds						
Site		9	9	9	9	9
Location		SB16	SB16	SB16	DW1	DWI
Sample Depth		8.5-9.5	3.9-4.5	0.9-3.9	7.3-7.6	4.1-4.6
Sample Number		6-SB16-8.5-9.5	6-SB16-3.9-4.5	6-SB16-0.9-3.9	6-DW1-7.3-7.6	6-DW1-4.1-4.6
Laboratory Sample ID		9605024-03	9605024-02	9605024-01	9604830-05	9604830-04
Matrix		soil	soil	lios	soil	soil
Date Sampled		4/30/96	4/30/96	4/30/96	4/27/96	4/21/96
Date Analyzed		5/15/96	2/12/96	5/15/96	2/10/96	5/10/96
his(2-Chloroethyl)ether	330 H	360 U	370 U	380 U	1500 U	3700 U
Phenol	330	300 U	370 U	380 U	1500 U	3700 U
2-Chlorophenol	330	360 U	370 U	380 U	1500 U	3700 U
1,3-Dichlorobenzene	330	360 U	370 U	380 U	1500 U	3700 U
1,4-Dichlorobenzene	330	360 U	370 U	380 U	1500 U	3700 U
1,2-Dichlorobenzene	330	360 U	370 U	380 U	1500 U	3700 U
2,2'-oxybis(1-chloropropane)	330	360 U	370 U	380 U	1500 U	3700 U
2-Methylphenol	330	360 U	370 U	180 D	1500 U	3700 U
Hexachloroethane	330	360 U	370 U	380 U	1500 U	3700 U
N-Nitroso-di-n-propylamine	330	360 U	370 U	380 U	1500 U	3700 U
4-Methylphenol	330	360 U	370 U	380 U	1500 U	3700 U
Nitrobenzene	330	360 U	370 U	380 U	1500 U	3700 U
Isophorone	330	360 U	370 U	380 U	1500 U	3700 U
2-Nitrophenol	330	360 U	370 U	380 U	1500 U	3700 U
2,4-Dimethylphenol	330	360 U	370 U	380 U	1500 U	3700 U
bis(2-Chloroethoxy)methane	330	360 U	370 U	380 U	1500 U	3700 U
2,4-Dichlorophenol	330	360 U	370 U	380 U	1500 U	3700 U
1,2,4-Trichlorobenzene	330	360 U	370 U	380 U	1500 U	3700 U
Naphthalene	330	200 J	370 U	380 U	1500	11000
4-Chloroaniline	330	360 U	370 U	380 U	1500 U	3700 U
Hexachlorobutadiene	330	360 U	370 U	380 U	1500 U	3700 U
4-Chloro-3-methylphenol	330	360 U	370 U	380 U	1500 U	3700 U
2-Methylnaphthalene	330	170 J	370 U	380 U	1500	12000
Hexachlorocyclopentadiene	330	360 U	370 U	380 U	1500 U	3700 U
2,4,6-Trichlorophenol	330	360 U	370 U	380 U	1500 U	3700 U
2,4,5-Trichlorophenol	800	D 006	920 U	D 056	3700 U	9200 U
2-Chloronaphthalene	330	360 U	370 U	380 U	1500 U	3700 U
2-Nitroaniline	800	D 006	920 U	950 U	3700 U	9200 U
Acenaphthylene	330	360 U	370 U	380 U	1500 U	3700 U
Dimethylphthalate	330	360 U	370 U	380 U	1500 U	3700 U
2,6-Dinitrotoluene	330	360 U	370 U	380 U	1500 U	3700 U
Acenaphthene	330	360 U	370 U	380 U	1500 U	3700 U
3-Nitroaniline	800	1 006	920 U	050 U	3700 U	9200 U
2,4-Dinitrophenol	800	D 006	920 U	050 U	3700 U	9200 U
Dibenzofuran	330	360 U	370 U	380 U	1500 U	3700 U
2,4-Dinitrotoluene	330	360 U	370 U	380 U	1500 U	3700 U
4-Nitrophenol	800	D 006	920 U	950 U	3700 U	9200 U
Fluorene	330	360 U	370 U	380 U	40 J	3700 U

Semivolatile Organic Compounds						
Site	_	9	v	4	•	,
Location		SBIG	SB16	2103	۽ ۽	9
Sample Depth		\$ 6-5 8	30.45	9510	DWI	DWI
Sample Number		217 213 y	C.F.C.C	V.S-5.9	7.3-7.6	4.1-4.6
I shorstory Sample ID		0-2510-6.3-9.3	6-5B16-3.9-4.5	6-SB16-0.9-3.9	6-DW1-7.3-7.6	6-DW1-4.1-4.6
Matrix	•	9605024-03	9605024-02	9605024-01	9604830-05	9604830-04
ividulis.		soil	lios	soil	soil	lios
Date Sampled		4/30/96	4/30/96	4/30/96	4/27/96	4/27/96
Date Analyzed	_ 5	5/15/96	\$/15/96	5/15/96	5/10/96	96/01/9
A Chlomotham to the	CKCL					
4-Chorophenyl-phenylether	330	360 U	370 U	380 U	1500 U	3700 U
Dethylphthalate	330	360 U	370 U	380 U	1500 U	3700 11
4-Nitroaniline	008	D 006	920 U	950 U	3700 U	6300
4,6-Dinitro-2-methylphenol	008	O 006	920 U	950 U	3700 U	2027
n-Nitrosodiphenylamine	330	360 U	370 U	380 U	1500 U	11 0028
4-Bromophenyl-phenylether	330	360 U	370 U	380 U	1500 1	3700
Hexachlorobenzene	330	360 U	370 U	380 U	1500 U	3700 11
Pentachlorophenol	008	D 006	920 U	950 U	3700 11	9200 11
Phenanthrene	330	360 U	370 U	380 U	1500 U	3200
Anthracene	330	360 U	370 U	380 U	1500 1	3700 11
Carbazole	330	360 U	370 U	380 U	1500 U	3200
Di-n-butylphthalate	330	360 U	370 U	380 U	120 J	220.1
Fluoranthene	330	360 U	370 U	380 U	1500 U	11 0028
Pyrene	330	360 U	370 U	380 U	1500 1	3700 11
Butylbenzylphthalate	330	360 U	370 U	380 U	1500 U	3200 11
3,3'-Dichlorobenzidine	330	360 UJ	370 UJ	380 UJ	II 00\$1	3700 111
Benzo[a]anthracene	330	360 U	370 U	380 U	1500 U	3700 11
Chrysene	330	360 U	370 U	380 U	1500 U	3200 11
bis(2-Ethylhexyl)phthalate	330	190 J	260 J	280 J	1 061	1 0062
Dr-n-octylphthalate	330	360 U	90 J	19 J	1500 U	3700 U
Benzol b Ituoranthene	330	360 U	370 U	380 U	1500 U	3700 U
Benzo[k]Iluoranthene	330	360 U	370 U	380 U	1500 U	3700 11
Benzola Jpyrene	330	360 U	370 U	380 U	1500 U	3700 U
Indenol 1, 2, 3-cd Jpyrene	330	360 U	370 U	380 U	1500 U	11 0028
Dibenz[a,h]anthracene	330	360 U	370 U	380 U	1100011	3200 11
Benzo[g,h,i]perylene	330	360 U	370 U	380 U	1500 11	3700 11
Total TIC concentration		59210	1641	3481	143500	314300
Units (ug/kg) Soil, (ug/L) Water	ug/kg				00001	006416
Dilution Factor		-	1	pud	4	01
Sample Weight/Volume		30.0 g	30.0 g	30.0 g	3008	30.08
% Moisture	_	7	6	12	6	9
						•

8 8 8 8 8 8 8 9 8 8 9 8 8 9 8 8 9 8 8 9 8 9 8 9 9 8 5-9.4 8 5-9.4 8 5-9.4 8 5-9.4 8 5-9.4 9 605024-06 8 605024-06 8 605024-06 8 605024-06 8 605024-06 8 605024-06 8 605025 U 11 U 11 U 110 U 110 U 0.25 U 0.25 U 5.4 U
8 SB9 8.5-9.4 8-SB9-8.5-9.4 9605024-06 soil 4/30/96 5/9-17/96 11 U 11 U 110 U 5.4 U

Site		000	œ	•	1
Location		SBIO	SBIO	0103	, <b>3</b> 05
Samule Denth		000		olde	SDS
mipo Depui		6.6.6	4.5-6.5	1-3.	9-8-8
Sample Number		8-SB10-9-9.9	8-SB10-4.5-6.5	8-SB10-1-3	7-SB5-8-8.6
Laboratory Sample ID		9605024-10	9605024-09	9605024-08	9604830-03
Matrix		lios	lios	lios	lios
Date Sampled		4/30/96	4/30/96	4/30/96	110s 76/77/A
Date Analyzed		5/10-17/96	5/10-17/96	5/10-1/5	5/10-18/96
	*RL				
JP-4	10	11 U	12 U	11 U	530
Diesel range, as diesel	10	11 U	12 U	11.0	\$10
Oil range, as oil	100	110 U	120 U	110 U	3800
Gasoline range	s	5.4 U	6.1 U	5.6 U	10 09L
Units (mg/kg) Soil, (mg/L) Water	mg/kg				
% Moisture		•	~	01	•
* RI - Reporting I imit				•	•

JP4, Gas, Diesel, Oil	,				
Site		7	7	9	Þ
Location		SB5	SB5	SB16	SB16
Sample Depth		4.5-5.4	1-3.	8.5-9.5	3.9-4.5
Sample Number		7-SB5-4.5-5.4	7-SB5-1-3	6-SB16-8.5-9.5	6-SB16-3.9-4.5
Laboratory Sample ID		9604830-02	9604830-01	9605024-03	9605024-02
Matrix	•	soil	soil	lios	soil
Date Sampled		4/27/96	4/27/96	4/30/96	4/30/96
Date Analyzed		5/10-18/96	5/9-17/96	5/10-18/96	5/9-17/96
	*RL				
JP-4	10	760	12 U	270	11 U
Diesel range, as diesel	10		12 U	130	. 17
Oil range, as oil	100	7800	120 U	300	110 U
Gasoline range	5	1200 NJ	5.8 U	460 NJ	5.5 U
Units (mg/kg) Soil, (mg/L) Water	mg/kg				
% Moisture		∞	14	7	6
* RL - Reporting Limit					

ve	DW1	4.1-4.6	6-DW1-4.1-4.6	9604830-04	lios	4/27/96	5/10-20/96		\$700	1900	00001	7300 NI	6
9	DW1	7.3-7.6	6-DW1-7.3-7.6	9604830-05	lios	4/27/96	5/10-20/96		1300	400	540	1700 NJ	∞
9	SB16	0.9-3.9	6-SB16-0.9-3.9	9605024-01	soil	4/30/96	96/11-6/9		11 U	11 U	110 U	5.7 U	12
								* RL	10	10	100	5	mg/kg
Site	Location	Sample Depth	Sample Number	Laboratory Sample ID	Matrix	Date Sampled	Date Analyzed		JP-4	Diesel range, as diesel	Oil range, as oil	Gasoline range	Units (mg/kg) Soil, (mg/L) Water % Moisture * PI Denotine I init

Volatile Organic Compounds	•					
Site		7	7	7	9	9
Location		MW5	MW4	MW2	MW3	MW3
Sample Depth		20.5	20.5	20.5	20.5	20.5
Sample Number		7-MWS-20.5	7-MW4-20.5	7-MW2-20.5	6-MW3-20.5RE	6-MW3-20.5
Laboratory Sample ID		9605104-05	9605104-04	9605104-03	9605104-02RE	9605104-02
Matrix		lios	soil	soil	soil	soil
Date Sampled		4/29/96	4/28/96	4/28/96	4/29/96	4/29/96
Date Analyzed		96/9/\$	96/9/\$	96/9/\$	96/6/5	96/9/\$
Chloromathana	CROL	11 11	11 []	11 0	54 U	11 UJ
Vind Chloride	- OT	11.0	n II	n II	54 U	11 U
Vinyi Chaorine Bromomethane	10	11 10	DII	11 0	54 U	11 (1)
Chloroethane	- 2	011	D 11	11 U	54 U	11 UJ
1.1-Dichloroethene		11 U	U 11	11 U	54 U	11 UJ
Acetone	10	23	73	19	290 J	20 J
Carbon Disulfide	10	11 U	111 U	11 U	54 U	11 UJ
Methylene Chloride	10	11 U	11 U	11 U	28 J	11 UJ
1,1-Dichloroethane	01	11 U	11.0	11 U	54 U	11 UJ
2-Butanone	10	2 J	53	2 J	53 J	11 UJ
Chloroform	10	11 U	11 U	11 U	54 U	11 UJ
1,1,1-Trichloroethane	10	11 U	11 U	11 U	54 U	11 UJ
Carbon Tetrachloride	10	11 U	11 U	11.0	54 U	11 UJ
Benzene	10	110	11 U	11 U	54 U	11 UJ
1,2-Dichloroethane	10	11 U	11 U	11 U	54 U	11 UJ
Trichloroethene	10	11 U	11 U	111 U	54 U	11 UJ
1,2-Dichloropropane	10	11 U	11 U	11 U	<b>54</b> U	11 UJ
Bromodichloromethane	10	11 U	UII	11 U	54 U	11 UJ
cis-1,3-Dichloropropene	10	11 U	11 U	11 U	54 U	11 UI
4-Methyl-2-Pentanone	10	11 U	11 U	11 U	54 U	11 UI
Toluene	10	11 U	1.5	1 J	2 J	11 UJ
trans-1,3-Dichloropropene	10	11 U	11 U	11 U	54 U	11 UJ
1,1,2-Trichloroethane	10	11 U	11 U	11 U	54 U	11 UI
Tetrachloroethene	10	11 U	11 U	11 U	54 U	11 UJ
2-Hexanone	10	11 U	15	11 U	54 U	11 UJ
Dibromochloromethane	10	11 U	11 U	11 U	54 U	11 UJ
Chlorobenzene	10	11 U	11 U	11 U	54 U	11 UJ
Ethylbenzene	01	11 U	11 U	11 U	54 U	11 UJ
Styrene	10	11 U	11 U	11 U	54 U	11 UJ
Bromoform	10	11 U	11 U	11 U	54 U	11 UJ
1, 1, 2, 2-Tetrachloroethane	10	11 U	. 11 U	11 U	54 U	11 UJ
1,2-Dichloroethene (total)	10	11 U	11 U	. 11 U	54 U	11 UJ
Xylene (total)	10	1.3	11 U	1.5	3 J	1 J
Total TIC concentration		57	98	0	74	148
Units (ug/kg) Soil, (ug/L) Water				,	,	
Dilution Factor			-		1	
Sample Weight/Volume		5.0g	5.0g	5,0g	1.08	90.0
% Moisture	_	71	~	71	•	•

Volatile Organic Compounds

20.5 6-MW3-20.5 9605104-02 9605104-02 9605104-02 soil 4/29/96 4/29 Composite result 11 UJ	
Composite result 8/6/2004  CRQL  CRQL  10  10  11  10  11  10  11  11  11  1	
Composite result 8/69/104-02 9605104-02 soil 4/29/96 4/29/96 4/29/96 110 UJ 11	
CROL  CROL  10  10  11 UJ	
CRQL CRQL 10 10 11 UJ 11	
CRQL   Composite result   5/6  10   11 UJ   11	
CRQL 10 10 11 UJ 11 UJ 10 11 UJ 10 11 UJ 10 11 UJ 11 U	
11 UJ 10 11 UJ 10 11 UJ 10 20 J 11 UJ 10 11 UJ 10 11 UJ 10 11 UJ 10 11 UJ 11	
11 UJ 10 11 UJ 11	
11 UJ 10 11 UJ 10 20 J 11 UJ 10 11 UJ 10 11 UJ 10 11 UJ 10 11 UJ 10 11 UJ 11	
11 UJ 10 20 J 10	
10 11 UJ 20 J 10 11 UJ 10 UJ 10 11 UJ 10 11 UJ 10 UJ 1	
20 J 10	
10	
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10 11 11 11 11 11 11 11 11 11 11 11 11 1	
11 U	
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10 1 01 10 10 10 10 10 10 10 10 10 10 10	
10 11 UJ	
e 10 11 UJ	
4-Methyl-2-Pentanone 10 11 UJ 10 U	
10 11 11 10 10 10 10 10 10 10 10 10 10 1	
11 03	
11 (1)	
10 11 UJ	
Dibromochloromethane 10 11 UJ 11 UJ 10 U	
10 11 UJ 10 U	
10 U 11 UI	
111 E1 01	
10	
•	
Water	
Sample Weight/Volume Composite result	

Low Level Volatile Organic Compounds Site	_			
Location Samule Denth				
Sample Number	MANG-FB2-PWDL	MANG-FB2-PW	MANG-FB1-DI	FB-TB1
Laboratory Sample ID	9605075-02DL	9605075-02	9605075-01	9605075-03
Matrix	water	water	water	water
Date Sampled	5/1/96	5/1/96	5/1/96	5/1/96
Date Analyzed	\$/9/96	9/8/96	9/8/96	96/8/5
Chloromethane 1	2.11	11 1	0.06 1	
Trincipalization of the state o			11 1	
vinyl chloride	0.7			) I
Difficularie				
Chloroethane	200			) : - •
1,1-Dichloroethene	0.7	0.1	0 1	0.1
Acetone \$		o s	S U	5 U
Carbon disulfide 1	2 U	1 U	1 U	1 n
Methylene chloride 2	4 U	0.1 J	0.05 J	0.14 J
trans-1,2-Dichloroethene	2 U	1 U	1 U	10
1,1-Dichloroethane	2 U	1 U	10	1 U
cis-1,2-Dichloroethene	2 U	1 U	1 U	1 0
2-Butanone 5	U 01	n s	D S	SU
Bromochloromethane 1	2 U	1 0	1 U	1 U
Chloroform 1	34 D	32 E	0.15 J	1 U
1,2-Dichloroethane	2 U	1 U	1 U	10
1,1,1-Trichloroethane	2 U	1 U	1 1	1 U
Carbon tetrachloride	2 U	1 U	1 U	1 U
Benzene 1	2 U	1 U	1 U	1 0
Trichloroethene 1	2 U	1 U	1 U	1 U
1,2-Dichloropropane	2 U	1 U	1 U	1 U
Bromodichloromethane 1	11 D	11	1 U	1 U
cis-1,3-Dichloropropene	2 U	1 U	1 0	1 U
4-Methyl-2-pentanone	U 01	3 U	S U	S U
Toluene 1	0.04 JD	0.04 J	0.21 J	0.03 J
trans-1,3-Dichloropropene	2 U	1 n	1 U	1 U
1,1,2-Trichloroethane	2 U	1 0	1 0	1 U
Tetrachloroethene	2 U	10	1 U	10
2-Hexanone 5	10 U	5 U	S U	5 U
Dibromochloromethane 1	1.4 JD	1.5	1 U	1 U
1,2-Dibromoethane	2 U	1 U	1 U	1 U
Chlorobenzene 1	2 U	1 U	1 U	1 U
Ethylbenzene 1	2 U	U 1	0.1 J	1 U
Styrene 1	2 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	2 U	1 0	η η	1 U

Site					
Location Sample Depth					
Sample Number		MANG-FB2-PWDL	MANG-FB2-PW	MANG-FB1-DI	FR.TB1
Laboratory Sample ID		9605075-02DL	9605075-02	9605075-01	9605075-03
Matrix		water	water	water	water
Date Sampled		5/1/96	\$/1/96	96/1/5	\$/1/ <b>5</b>
Date Analyzed		9/6/6	5/8/96	96/8/5	96/8/5
	CRQL			)	
Bromoform		2 U	1 U	11 1	-
1,3-Dichlorobenzene	_	2 U	חו		-
1,4-Dichlorobenzene	_	2 U			-
1,2-Dichlorobenzene	1	2 11			
1,2-Dibromo-3-chloropropane	-	2 U	n I		-
Xylene (total)	-	0.18 JD	0.26 J	F 68:0	-
Total TIC concentration		0	0		í
Units (ug/kg) Soil, (ug/L) Water					
Dilution Factor		6	-	-	-
Sample Weight/Volume		25.0 ml	O 3C	1 0 30	

Low Level Volatile Organic Compounds			-		
Site		7	7	9	6.8.7
Location			MW3	MW1	
Sample Depth					
Sample Number		7-TB-A	7-MW3-GW1	6-MW1-GW1	6,7-TB1
Laboratory Sample ID		9605104-06	9605172-01	9605172-02	9605172-03
Matrix		water	water	water	water
Date Sampled		\$/3/96	96/9/\$	2/6/96	96/9/\$
Date Analyzed CR	CROL	96/9/9	96/8/5	2/8/96	96/8/\$
Chloromethane		1 U	1 U	1 U	1 U
Vinyl chloride		1 U	1 U	1 U	O I
Bromomethane	_	1 U	1 U	1 U	1 U
Chloroethane		1 U	1 U	1 0	1 U
1,1-Dichloroethene		1 U	1 U	1 U	1 U
Acetone	_	s u	æ	æ	S U
Carbon disulfide		1 U	1 U	1 U	1 U
Methylene chloride	- 2	0.36 BJ	2 U	2 U	0.24 J
trans-1,2-Dichloroethene		1 U	1 U	1 U	1 0
1,1-Dichloroethane	_	1 U	1 U	0.31 J	1 U
cis-1,2-Dichloroethene		10	0.31 J	7.4	1 U
2-Butanone	- ~	S U	<b>&amp;</b>	ય	SU
Bromochloromethane		1 U	1 U	1 U	1 U
Chloroform		1 U	0.05 J	1 0	1 U
1,2-Dichloroethane		1 U	1 U	1 U	1 U
1,1,1-Trichloroethane		1 U	1 U	1 U	1 U
Carbon tetrachloride		1 U	1 N	1 U	1 U
Benzene		1 U	1 U	1 U	1 U
Trichloroethene		1 U	1 U	1 U	1 U
1,2-Dichloropropane		1 U	1 U	1 U	1 U
Bromodichloromethane		1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene		1 U	1 U	1 U	n 1
4-Methyl-2-pentanone	2	5 U	S U	S U	s U
Toluene		0.03 J	1 C	1 U	0.06 J
trans-1,3-Dichloropropene		1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	1	1 U	1 U	1 U	1 U
Tetrachloroethene		1 U	1 U	1 U	1 U
2-Hexanone	· •	S U	S U	o s	s u
Dibromochloromethane ·		1 U	1 U	ם ם	1 n
1,2-Dibromoethane	_	1 U	1 U	D I	n I
Chlorobenzene		1 U	D I	D :	D I
Ethylbenzene		D:	) i	D:	10
Styrene		0 !	1 0	0.1	) : 
1, 1, 2, 2-Tetrachloroethane		1 O	1 0	0	1 0

Cito		t	ł	•	
Sille		•		9	6&7
Location			MW3	MW1	
Sample Depth					
Sample Number		7.TB-A	7-MW3-GWI	6-MW1-GW1	67.TB
Laboratory Sample ID		9605104-06	9605172-01	9605172-02	9605172-03
Matrix		water	water	water	wate
Date Sampled		5/3/96	96/9/5	96/9/\$	6/9/\$
Date Analyzed		96/9/8	9/8/\$	96/8/5	96/8/5
	CRQL				
Bromoform	1	1 U	1 U	ΩΙ	
1,3-Dichlorobenzene		1 U	n I	11 1	
1,4-Dichlorobenzene		1 0	n I		
1,2-Dichlorobenzene	-	1 0			
1,2-Dibromo-3-chloropropane	1	1 U	. e	) <u>c</u>	
Xylene (total)	1	1 U	UI	D I	
Total TIC concentration		0	0	·	
Units (ug/kg) Soil, (ug/L) Water					
Cincion Facion			<b>-</b>	1	

Low Level Volatile Organic Compounds		
Site	-	
Location	MW2	
Sample Depth		
Sample Number	1-MW2-GW1	
Laboratory Sample ID	9605104-07	
Matrix	water	
Date Sampled	9/2/9	
Date Analyzed		
CRQL		
Chloromethane 1	1.0	
Vinyl chloride 1	10	
Bromomethane 1	1.0	
Chloroethane	nι	
1,1-Dichloroethene	10	
Acetone 5	24	
Carbon disulfide	1.0	
Methylene chloride 2	2 U	
trans-1,2-Dichloroethene	10	
1,1-Dichloroethane	1.0	
cis-1,2-Dichloroethene	1.0	
2-Butanone 5	~	
Bromochloromethane 1	10	
Chloroform 1	1.0	
1,2-Dichloroethane	1 U	
1,1,1-Trichloroethane	1.0	
Carbon tetrachloride	10	
Benzene	10	
Trichloroethene	10	
1,2-Dichloropropane	10	
Bromodichloromethane 1	. 10	
cis-1,3-Dichloropropene	1.0	
4-Methyl-2-pentanone	<b>5</b> U	
Toluene 1	10	
trans-1,3-Dichloropropene	10	
1,1,2-Trichloroethane	10	
Tetrachloroethene 1	10	
2-Hexanone 5	\$ U	
Dibromochloromethane 1	10	
1,2-Dibromoethane	10	
Chlorobenzene	1.0	
Ethylbenzene 1	10	
Styrene	10	
1, 1, 2, 2-Tetrachloroethane	10	

Site         I. Location         MW2           Sample Depth         Sample Depth         1-MW2-GW1           Sample Number         1-MW2-GW1           Laboratory Sample ID         9605104-07           Matrix         water           Date Sampled         5/2/96           Date Analyzed         5/6/96           Bromoform         1         1 U           1,3-Dichlorobenzene         1         1 U           1,2-Dichlorobenzene         1         1 U           Vylene (total)         1         1 U           Units (ug/kg) Soil, (ug/L) Water         0         0								Û	ח	, D	ם	2	מ		
	MW2	 I-MW2-GW1	9605104-07	water	5/2/96	96/9/5	• _		1	1		1	1		

MANG-FB2-PW MANG-FB1-1 9605075-02 9605075-02 9605075-03					
MANG-FB1-PB	ion In Dearth				
ory Sample ID         9605075-02         9605075-02           advaced         Vasider         Vasider           advaced         CRQI         10 U           Idorocelty)cliefter         10         10 U           Idorochenzame         10         10 U           Appleanol         10         10 U           Inchesion         10         10 U           Appleanol         10         10 U           Inchesion         10         10 U           Idorochenzame         10         10 U           <	le Dumber		MANG-FB2-PW	MANG-FB1-DI	
water         s/16/96         5/16/96	atory Sample ID		9605075-02	9605075-01	
S1196   S11696   S1	*		water	water	
Apether   CRQL	Sampled		5/1/96	5/1/96	
CRQL			5/16/96	5/16/96	
10   10   10   10   10   10   10   10		ROL			
10   10   10   10   10   10   10   10	-Chloroethyl)ether	10	10 U	10 U	
10   10 U   10	ol	10	10 U	10 U	
10   10   10   10   10   10   10   10	lorophenol	10	10 U	10 U	
10 10 10 10 10 10 10 10 10 10	Sichlorobenzene	10	10 U	10 U	
10 10 10 10 10 10 10 10 10 10	Sichlorobenzene	01	10 U	10 U	
10 10 10 10 10 10 10 10 10 10	Sichlorobenzene	10	10 U	10 U	
10 10 10 10 10 10 10 10 10 10	oxybis(1-chloropropane)	10	10 U	10 U	
ydamine 10  ydamine 10  10  10  10  10  10  10  10  10  10	sthylphenol	10	10 U	10 U	
ylamine 10  10  10  10  10  10  10  10  10  10	chloroethane	10	10 U	10 U	
10 10 U 1	irroso-di-n-propylamine	10	10 U	10 U	
methane 10 10 U	ethylphenol	10	10 U	10 U	
methane 10 10 U	henzene	10	10 U	10 U	
methane 10 10 U	lorone	10	10 U	10 U	
methane 10 10 U	rophenol	10	10 U	10 U	
methane 10 10 U	himethylphenol		10 U	10 U	
e 10 10 10 10 10 10 10 10 10 10 10 10 10	Chloroethoxy)methane	: 0	D 01	10 U	
e 10 10 1 10 U 10 U 10 U 10 U 10 U 10 U	yichlorophenol	10	10 U	10 U	
10 10 U 1	Trichlorobenzene	10	10 U	10 U	
10 10 U 1	halene	10	10 U	10 U	
10 10 U 10 U	proaniline	01	10 U	10 U	
10 10 U 10	hlorobutadiene	10	10 U	10 U	
10 10 U 25 25 U 10 10 U 27 10 U 28 25 U 29 10 U 29 10 U 20 10 U	oro-3-methylphenol	10	10 U	10 U	
Interpretation   10 U	thylnaphthalene	10	10 U	10 U	
10 10 U 25 U 10 U 25 U 10 U 25 U 10 U 1	chlorocyclopentadiene	10	10 U	10 U	
25 25 U 26 10 U 27 25 U 28 U 28 U 29 U 10 U 10 U 20 25 U 20 25 U 20 25 U 21 00 U 22 25 U 23 25 U 24 25 U 25 U 26 U 27 U 28 U	-Trichlorophenol	10	10 U	10 U	
10 10 U 25 25 U 10 10 U 10 10 U 10 10 U 10 10 U 25 25 U	-Trichlorophenol	25	25 U	25 U	
25 25 U 10 10 U 10 10 U 10 U 25 25 U 25 25 U 10 U 10 U 25 25 U 25 U 25 U 25 U 25 U 25 U 25 U	oronaphthalene	10	10 U	10 U	
10 10 U 10 10 U 10 10 U 25 25 U 25 U 10 U 10 U 25 U 25 U 25 U 25 U 25 U 25 U 25 U 25	roaniline	25	25 U	25 U	
10 10 U 10 10 U 25 25 U 25 25 U 10 10 U 10 U 25 U 25 U 25 U 25 U 25 U 25 U 25 U 25	anhthviene	10	10 U	10 U	
10 10 U 25 25 U 25 25 U 10 10 U 10 U 25 U 25 U 25 U 25 U 25 U 25 U 25 U 25	sthylohthalate	01	10 U	10 U	
10 10 U 25 25 U 10 10 U 10 10 U 25 U 25 U 25 U 25 U 25 U 25 U 25 U	Ninitrotoluene	01	10 U	10 U	
25 25 U 25 25 U 10 10 U 25 25 U 25 U	anhthene	01	10 U	10 U	
25 25 U 10 10 U 25 25 U 26 25 U	roanijne	25	25 U	25 U	
10 10 U 10 25 25 U	hinitronhenol	*	25 11	25 U	
10 10 U 25 U 25 U	and opinion	3 9	11 01	0.01	
25 25 25 U	COUNT OF THE PROPERTY OF THE P	2 5	11 01	11 01	
25 25 0	hintrotoluene	2 ;	0 OI	0.01	
	rophenol	52	25 U	0 \$7	

	MANG-FB1-DI	70050 / 5-01 water	waid	96/91/9		n 01	10 U	25 U	25 U	10 C	10 U	10 U	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 C	) 	10.0	n 01	D 01	10 U	10 U	10 C	10 N	10 U	96		1000
	MANG-FB2-PW 9605075-02	Water	5/1/96	5/16/96		10 U	10 U	25 U	25 U	10 U	10 U	10 U	25 U	10 U	10 U	10 U	1 BJ	10 U	10 U	10 U	10 U			10 U	10 U	10 U	10 U	10 U	10 U	10 U	19	•	I 0001
Semivolatile Organic Compounds Site Location Sample Depth	Sample Number Laboratory Sample ID	Matrix	Date Sampled	Date Analyzed	CRQL	4-Chlorophenyl-phenylether	Diethylphthalate 10	4-Nitroaniline	4,6-Dinitro-2-methylphenol . 25	n-Nitrosodiphenylamine 10	4-Bromophenyl-phenylether 10	Hexachlorobenzene 10	Pentachlorophenol 25	Phenanthrene 10	65		halate	ithene			3,3 -Lichlorobenzaine 10 Benzofalanthracene 10		(hexyl)phthalate		Benzo[b]fluoranthene 10	Benzo[k]fluoranthene 10	Benzo[a]pyrene 10	Indeno[1,2,3-cd]pyrene 10	ů.	Benzo[g,h,i]perylene 10		Units (ug/kg) Soil, (ug/L) Water ug/L	Dutuon Factor

										*										
MANG-FBI-DI	9605075-01	water	5/1/96	5/16-24/96		S U	1 0	4.4 B	0.3 U	2 U	Ω9	4 B	1 U	0.2 U	5 U	1 U	3 U	2 U	11.5 B	0
MANG-FB2-PW	9605075-02	water	5/1/96	5/16-24/96		n s	1.8 BW	57.8 B	0.3 U	2 U	7 B	8.7 B	1.3 B	0.2 U	5 U	1 UW	3 U	2 UW	288	0
					CRDL	9*	10	200	* 4	S	10	25	ဇ	0.2	40	5	10	*2	20	T/8n
Inorganics Site Location Sample Depth Sample Number	Laboratory Sample ID	Matrix	Date Sampled	Date Analyzed		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc	Units (mg/kg) Soil, (ug/L) Water % Solids * Project-specific CRDL

Low Level Volatile Organic Compounds					
Site				7	7
Location Sample Denth				MW5	MW4
Sample Number		TB-C	TB-B	7-MWS-GW1	7-MW4-GW1
Laboratory Sample ID	65096	9605398-05	9605398-10	9605398-03	9605398-01
Matrix		water	water	water	water
Date Sampled		5/13/96	5/14/96	5/13/96	5/13/96
Date Analyzed	_	5/15/96	5/15/96	5/15/96	5/15/96
Chloromethane	3 _	1.0	1 U	1 U	1 U
Vinvl chloride		11.1	1.0	1 0	0.1
Bromomethane		0 I	1 U	) I	1 U
Chloroethane		1 U	1 0	1 U	1 U
1,1-Dichloroethene		1 U	1 U	1 U	1 U
Acetone		1 U	1 U	1.4 J	1.7 J
Carbon disulfide		1 U	1 U	1 U	1 U
Methylene chloride 2	-	0.16 BJ	0.94 BJ	2 U	2 U
trans-1,2-Dichloroethene		1 U	n n	1 U	1 U
1,1-Dichloroethane		1 U	1 U	10	1 U
cis-1,2-Dichloroethene		1 U	1 U	1 U	1.2
2-Butanone 5		S U	2 U	<b>x</b>	0.68 J
Bromochloromethane 1		1 U	1 U	1 U	1 U
Chloroform		1 U	1 U	0.21 J	1 U
1,2-Dichloroethane		1 U	1 U	1 U	ם ו
1,1,1-Trichloroethane		1 U	1 U	1 U	1 U
Carbon tetrachloride		1 U	1 U	1 U	1 U
Benzene 1		1 U	0.03 J	1 U	0.39 J
Trichloroethene		1 U	1 U	1 n	0.18 J
1,2-Dichloropropane		1 U	1 U	1 U	1 U
Bromodichloromethane 1		1 U	1 U	1 C	1 U
cis-1,3-Dichloropropene		1 U	1 U	1 U	1 U
4-Methyl-2-pentanone		<b>S</b> U	5 U	0.32 J	5 U
Toluene 1		0.01 J	0.06 J	1 U	1 U
trans-1,3-Dichloropropene		1 U	1 N	1 U	n <b>1</b>
1,1,2-Trichloroethane		1 U	1 U	n 1	1 U
Tetrachloroethene 1		1 U	1 U	1 U	1 U
2-Hexanone 5		S U	5 U	<b>5</b> U	s U
Dibromochloromethane 1		1 U	1 U	1 U	1 U
1,2-Dibromoethane		1 U	1 U	1 U	1 U
Chlorobenzene		1 U	1 U	1 U	1 U
Ethylbenzene	_	1 U	1 U	1 U	1 U
Styrene		1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane		1 U	1 U	1 U	1 U

Low Level Volatile Organic Compounds	_				
Location				7	7
Sample Depth				MWS	MW4
Sample Number		TB-C	TB-B	7-MWS-GW1	7-MW4-GW1
Laboratory Sample ID		9605398-05	9605398-10	9605398-03	9605398-01
Matrix		water	water	water	water
Date Sampled		5/13/96	5/14/96	5/13/96	\$/13/96
Date Analyzed		5/15/96	5/15/96	5/15/96	96/51/5
	CRQL				
Bromoform	1	1 N	1 U		11.1
1,3-Dichlorobenzene	1	1 U	1 0		
1,4-Dichlorobenzene		1 U	1 0	n I	
1,2-Dichlorobenzene	_	1 0	1 U	D I	
1,2-Dibromo-3-chloropropane		1 U	1 U	2	) <u>c</u>
Xylene (total)		1 U	1 U	0.1	1 800
Total TIC concentration	ng/L	0	0		\$ 56
Units (ug/kg) Soil, (ug/L) Water					
Dilution Factor		. 1	-	-	-
Sample Volume	_	25.0 mL	25.0 mL	25.0 mL	25.0 mL

				MANG-FB1-DI	9605075-01	water	\$/1/96	5/6-17/96		0.25 U	0.25 U	0.25 U	1 U	100
				MANG-FB2-PW	9605075-02	water	2/1/96	9/2-11/96		0.25 U	0.25 U	0.25 U	1 U	100
•		,							* RL	0.25	0.25	0.25	-	
JP4, Gas, Diesel, Oil	Site	Location	Sample Depth	Sample Number	Laboratory Sample ID	Matrix	Date Sampled	Date Analyzed		Diesel range, as diesel	Gasoline range	JP-4	Oil range, as oil	Units (mg/kg) Soil, (mg/L) Water % Moisture * RL - Reporting Limit

Low Level Volatile Organic Compounds			
Site	7	9	
Location	MW2	MW2	
Sample Depth			
Sample Number	7-MW2-GW1	6-MW2-GW1	
Laboratory Sample ID	90-338-09	9605398-08	
Matrix	water	water	
Date Sampled	5/12/96	5/13/96	
	5/15/96	5/15/96	
CRQL			
Chloromethane	1 U	D.T.	
Vinyl chloride	10	1.0	
Bromomethane 1	1 U	1 U	
Chloroethane	1 U	1 U	
1,1-Dichloroethene	1 0	10.	
Acetone 1	1.8 J	5.3	
Carbon disulfide	1.0	10	
Methylene chloride 2	2 U	2 U	
trans-1,2-Dichloroethene	10	1 U	
1,1-Dichloroethane	1 U	0.28 J	
cis-1,2-Dichloroethene	1 U	1 U	
2-Butanone 5	0.79 J	1.1 J	
Bromochloromethane 1	10	1 U	
Chloroform	1 U	1 U	
1,2-Dichloroethane	10	1 U	
1,1,1-Trichloroethane	10	10	
Carbon tetrachloride	10	1 U	
Benzene 1	5.5	1 U	
Trichloroethene 1	10	0.52 J	
1,2-Dichloropropane	1 U	1 U	
Bromodichloromethane 1	10	10	
cis-1,3-Dichloropropene	1 C	1 U	
4-Methyl-2-pentanone	0.47 J	2.5 J	
Toluene	1 U	1 U	
trans-1,3-Dichloropropene	D I	nn	
1,1,2-Trichloroethane	1 U	1 U	
Tetrachloroethene 1	1 U	1 U	
2-Hexanone 5	2 U	<b>5</b> U	
Dibromochloromethane 1	1 U	1 U	
1,2-Dibromoethane	1 U	1 U	
Chlorobenzene	1 U	1 U	
Ethylbenzene 1	23	1.0	
Styrene	1 U	1.0	
1,1,2,2-Tetrachloroethane	10	1 U	

7-MW4-GW1 7-MW2-GW1 9005398-08 water water stands 512396 572396 5	
water         water         water         water         water         s/13/96         \$/13/96<	7-MW5-GW1
Water         Water         S/12/96         5/	9605398-03
5/23/96  U U U U U U U U U U U U U U U U U U	water 5/13/96
10 U 10 U	5/23/96
10 C 10 C	10 U
10 C C C C C C C C C C C C C C C C C C C	10 U
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10 C 10 C	10 U
10 C 10 C	10 U
10 C 10 C	10 O
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	11 01

√ 6 √W2	<i>1.</i>	80	ter	96	96		10 U	11	25 U	25 13	D 01	10 U	10 U	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	Σ.		1	ī
7 (6 MW2 MW2	CWM-9		water	•			10 U	10 U	25 U			10 U	10 U	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U		10 U	10 U	43 1023			nL 1000 mL
7 MW4 MV	CWM-7			5/13/96 5/12/96			10 U	1.1	25 U	25 U	10 U	10 U	10 U	25 U	10 U	10 U	10 U			10 U	10 U	10 UJ	10 U			10 U						D	249			mL 1000 mL
7 MW5	7-MW5-GW1 7-MW4-GW1			5/13/96 5/1			10 U	1.5	25 U	25 U	10 U	10 U	10 U	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	394			1000 mL 1000 mL
	WM-7	096				CRQL	10	10	25	25	10	- 01	10	25	10	10	10	10	10	10	10	10	10	10	10	10	10	10	01	10	- 01	10	ng/L			10
Semivolatile Organic Compounds Site Location	Sample Depth Sample Number	Laboratory Sample ID	Matrix	Date Sampled	Date Analyzed		4-Chlorophenyl-phenylether	Diethylphthalate	4-Nitroaniline	4,6-Dinitro-2-methylphenol	n-Nitrosodiphenylamine	nylether	Hexachlorobenzene	Pentachlorophenol	Phenanthrene	Anthracene	Carbazole	Di-n-butylphthalate	Fluoranthene	Pyrene	Butylbenzylphthalate	3,3'-Dichlorobenzidine	Benzo[a]anthracene	Chrysene	bis(2-Ethylhexyl)phthalate	Di-n-octylphthalate	Benzolb Itluoranthene	Benzolk Ithoranthene	Benzolajpyrene	Indeno[1,2,3-cd]pyrene	Dibenz[a,h]anthracene	Benzo[g,h,i]perylene	Total TIC concentration	Units (ug/kg) Soil, (ug/L) Water	County Veterior	Sample Volume

Inorganics	_	ţ	t	t	
Site		7	7	7	
Location		MW5	MW5	MW4	
Sample Depth					
sample Number		7-MW5-GW1 (Diss.)	7-MW5-GW1	7-MW4-GW1 (Diss.)	
Laboratory Sample ID		9605398-04	9605398-03	9605398-02	
Matrix		water	water	water	
Date Sampled		5/13/96	5/13/96	5/13/96	
Date Analyzed		5/24/96 - 6/21/96	5/24/96 - 6/21/96	5/24/96 - 6/21/96	5/24/96 - 6/21/96
	CRDL				
Antimony	9*	s us	tu s	s UJ	
Arsenic	91	1 U	1 U	1 U	
Barium	200	103 J	147 J	160 J	
Beryllium	* 4	0.3 U	0.3 J	0.3 U	
Cadmium	80	2 U	2.7 U	2.5 U	
Chromium	10	0.99	10.6 U	8.4 U	
Copper	25	4 U	6.9 J	4 U	
Lead	3	n 1	2.2 J	1 U	
Mercury	0.2	0.2 U	0.2 U	0.2 U	
Nickel	. 40	D S	6.5 U	7.1 U	
Selenium	2	I UJ	1 UJ	1 UI	
Silver	10	3.0	3 U	3 C	
Thallium	*2	2 UJ	2 UJ	2 UJ	
Zinc	20	12.2 U	30.6 U	42.8	
Units (mg/kg) Soil, (ug/L) Water * Project-specific CRDL	T/gn				

Location         MW2         MW2           Sample Depth         7-MW2-GW1 (Diss.)         7-MW2-GW1           Sample Number         7-MW2-GW1 (Diss.)         7-MW2-GW1           Laboratory Sample ID         9605398-07         9605398-06           Matrix         water         5/12/96         5/12/96           Date Sampled         5/12/96         5/12/96         5/12/96           Date Sampled         5/12/96         5/12/96         5/12/96           Date Sampled         5/12/96         5/12/96         5/12/96           Date Analyzed         CRDI         5/12/96         5/12/96           Arsenic         10         1 U         1 U           Arsenic         10         96 J         1 U         1 U           Baryllium         * 4         0.3 U         0.3 U         6 U           Copper         5         4 U         4 U         4 U           Copper         5         4 U         4 U         1 U           Meeury         5         4 U         5 U           Nickel         5         1 U         5 U           Nickel         5         1 U         5 U           Nickel         5         1 U	9	9
Formula   T-MW2-GW1 (Diss.)   T-MW2-GV398-T     Autory Sample ID	MW2	MW2
atory Sample ID  x  water  x  yall	6-MW2-GW1 (Diss.)	6-MW2-GW1
x         water         wa           Sampled         \$/12/96         \$/12/96           Analyzed         CRDL         \$/12/96         \$/12/96           Analyzed         CRDL         \$/12/96         \$/12/96           cony         * 6         \$/12/96         \$/21/96           cony         * 6         \$/21/96         \$/21/96           cony         * 4         \$/21/96         \$/21/96           cony         * 6         \$/2	60-368-09	9605398-08
Sampled         \$/12/96 <t< td=""><td>water</td><td>water</td></t<>	water	water
Analyzed S/24/96 - 6/21/96 S/24/96 S	5/13/96	5/13/96
tic tony	5/24/96 - 6/21/96	5/24/96 - 6/21/96
ic m	111 3	
m 200 96 J 11 11 11 11 11 11 11 11 11 11 11 11 1		ro s
ium *4 0.3 U	0.1	
r 25 0.3 U 0.0 U 0	119 J	202
r 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2 U 2	0.3 U	0.8 J
rr 255 6 U rr 255 4 U rry 0.2 0.2 U rry 40 5 U rm 5 1 U rm 7 2 U rm *2 2 U	2.9 U	2 U
rr 25 4 U  rry 3 1 U  rry 0.2 0.2 U  um 5 1 U  rm 10 3 U  um *2 2 U	8.4 U	17.5 U
ITY 0.2 0.2 U 0.2	4 U	11.3 J
Iry 0.2 U 0.	1 U	4.4
1 40 5 U um 5 1 UJ 10 3 U um *2 2 UJ	0.2 U	0.2 U
um 5 1 UJ 10 3 U um *2 2 UJ	10.1 U	21 U
10 3 U 3 U + 2 UJ	1.2 J	fil t
um *2 2 UJ	3 C	n e
	2 UJ	2 111
Zinc 20 60.6 73.7	57.1	107

JP4, Gas, Diesel, Oil					
Site	•	7	7	7	9
Location		MW5	MW4	MW2	MW2
Sample Depth					
Sample Number		7-MW5-GW1	7-MW4-GW1	7-MW2-GW1	6-MW2-GW1
Laboratory Sample ID		9605398-03	9605398-01	9605398-06	9605398-08
Matrix		water	water	water	water
Date Sampled		5/13/96	5/13/96	5/12/96	5/13/96
Date Analyzed		5/18-23/96	5/17-23/96	5/18-23/96	5/18-23/96
	* RL				
Diesel range, as diesel	0.25	0.25 U	0.34	0.25 U	0.35 NJ
Oil range, as oil	-	1 U	1 U	1 U	U 1
JP-4	0.25	0.29	0.52	0.27	0.76
Gasoline range	0.25	0.25 U	1.4 NJ	0.34 NJ	0.25 U
Units (mg/kg) Soil, (mg/L) Water	mg/L				
* RL - Reporting Limit					

Low Level Volatile Organic Compounds	_				c
Site Location					8 MW4
Sample Depth	É	7.87	TR-F	T.B.T	8-MW4-GWIDI
Sample Number  I aboratory Samule ID	9605494-05	1D-1 9605494-10	9605458-10	9605458-05	9605458-03DL
Matrix	water	water	water	water	water
Date Sampled	5/15/96	5/15/96	5/14/96	5/14/96	5/14/96
Date Analyzed		5/16/96	5/15/96	5/15/96	5/16/96
Chloromethane	10	1 0	10	10	2 U
Vinyl chloride 1	n I	10	10	1 U	2 U
Bromomethane	10	1 U	1.0	1 U	2 U
Chloroethane	10	10	1 U	1 U	2 U
1,1-Dichloroethene	1.0	1 U	1 U	1 U	0.54 J
Acetone	10	1 U	1 U	1 U	<b>x</b>
Carbon disulfide	10	1 U	10	10	2 U
Methylene chloride 2	0.21 BJ	0.2 BJ	0.24 BJ	0.16 BJ	<b>4</b> U
trans-1,2-Dichloroethene	10	1 U	1 U	10	2 0
1,1-Dichloroethane 1	10	1 0	1 U	10	0.62 J
cis-1,2-Dichloroethene	10	1 U	1 U	1 n	81
2-Butanone 5	20	S U	S U	0 <b>\$</b>	<b>x</b>
Bromochloromethane	10	1 U	1 U	1 U	2 U
Chloroform	10	1 U	1 U	10	1.9 J
1,2-Dichloroethane	1 U	1 U	1 U	1 U	2 U
1,1,1-Trichloroethane	10	1 U	1 U	1 U	0.84 J
Carbon tetrachloride	10	1 U	1 U	1 n	2 U
Benzene 1	1 U	1 U	1 U	1 0	2.0
Trichloroethene 1	10	1 U	1 U	<b>1</b>	2 J
1,2-Dichloropropane	1.0	1 U	1 U	1 U	2 U
Bromodichloromethane 1	1 U	10	1 U	<b>n 1</b>	0.2 J
cis-1,3-Dichloropropene 1	10	1 U	1 U	10	2 U
4-Methyl-2-pentanone 5	n s	s u	s u	n s	10 U
Toluene 1	1 U	1 U	n r	1 a	2 O
trans-1,3-Dichloropropene	10	1 U	1 U	1 U	2 Q
1,1,2-Trichloroethane	10	10	1 U	1 U	2.0
Tetrachloroethene 1	10	10	1 U	1 C	17 J
2-Hexanone 5	D S	2 U	s u	n s	10 U
Dibromochloromethane 1	10	1 U	1 U	10	2 U
1.2-Dibromoethane	n n	1 U	1 U	10	2 U
Chlorobenzene	10	1 0	1 U	1 U	2 U
Ethylbenzene	10	1 U	1 U	1 U	2 U
Styrene	10	1 U	10	10	2 U
1.1.2.2-Tetrachloroethane	n1	n n	1 U	1 U	2 U
Bromoform	10	1 U	1 U	1 U	2 U
1,3-Dichlorobenzene	1 U	1 U	10	10	2 U
1,4-Dichlorobenzene	10	1 U	1 C	1 U	
1,2-Dichlorobenzene	1 n	1 U	1 U	1.0	2 U

TB-G     TB-F     TB-E     TB-E     TB-D       9605494-05     9605498-10     9605458-10     9605458-0       water     water     water     water       \$/15/96     \$/15/96     \$/14/96     \$/14/96       \$/16/96     \$/16/96     \$/15/96     \$/15/96     \$/15/96       1 U     1 U     1 U     1 U       1 U     1 U     1 U     1 U     1 U       0     0     0     0     0	Low Level Volatile Organic Compounds Site Location Sample Depth Sample Depth Sample Number Laboratory Sample ID Matrix Date Sampled Date Analyzed CRQL 1,2-Dibromo-3-chloropropane I Sylene (total) I Cotal TIC concentration I Cotal TIC concentration I Cotal TIC concentration
1 1 1 25.0 mL 25.0 mL 25.0 mL 25.0 mL	Ornis (tig/kg) Son, (tig/L) water Dilution Factor Sample Weight/Volume

Low Level Volatile Organic Compounds			•	•	•
Site	∞	<b>6</b> 0	00	••	∞ :
Location	MW4	MW4	MW3	MW3	MW3
Sample Depth					
Sample Number	8-MW4-GW1	8-MW4-GW1	8-MW3-GW1DL	8-MW3-GW1	8-MW3-GW1
Laboratory Sample ID	9605458-03	9605458-03	9605494-08DL	9605494-08	9605494-08
Matrix	water	water	water	water	Walcr
Date Sampled	5/14/96	5/14/96	5/15/96	96/51/6	06/CT/C
Date Analyzed	5/15/96	Composite result	5/17/96	5/16/96	Composite result
Chicamothana		n I	50 U	1 U	1 U
Vinol Chloride	n n	10	50 U	0.22 J	0.22 J
Bromomethane	D I	10	50 U	10	υ 1
Chloroethane	1 0	10	50 U	1 U	1 U
1.1-Dichloroethene	0.67 J	0.67 J	50 U	3.8	3.8
Acetone	æ	พ	ଅ	<b>x</b>	R
Carbon disulfide	1 0	1 U	20 U	1 U	1 U
Methylene chloride 2	2 U	2 U	100 U	2 U	2 U
trans-1.2-Dichloroethene	10	1 U	20 U	0.38 J	0.38 J
1.1-Dichloroethane	0.85 J	0.85 J	20 U	10	10
cis-1.2-Dichloroethene	26 J	18	520	380 J	520
2-Butanone 5	<b>x</b>	<b>x</b>	æ	<b>x</b>	~
Bromochloromethane	1 U	1 U	20 U	1 U	1 U
Chloroform	2.7	2.7	S0 U	4.3	4.3
1 2-Dichloroethane	10	1 U	20 U	1 0	1 U
1,4-Diction Contains	f 26:0	0.97 J	5.5 J	6.1	6.1
Carbon tetrachloride	n I	10	50 U	0.77 J	0.77 J
Benzene 1	10	10	05 U	0.12 J	0.12 J
Trichlomethene	2.5	2.5	55	48 J	55
1 2-Dichloromonane	1 U	10	20 U	1 U	1 U
Bromodichloromethane 1	0.32 J	0.32 J	20 U	0.28 J	0.28 J
cis-1.3-Dichloropropene	10	10	20 U	10	n ı
4-Methyl-2-pentanone 5	n <b>\$</b>	5 U	250 U	D S	2 U
Toluene	10	10	50 U	1 0	1 0
trans-1.3-Dichloropropene	10	1 U	20 U	1 U	1 n
1.1.2-Trichloroethane	10	1 0	20 U	10	1 U
Tetrachloroethene 1	18	18	50 U	1 U	1 U
2-Hexanone 5	n \$	2 U	250 U	0 \$	0 S
Dibromochloromethane 1	10	1 U	20 U	1 U	n 1
1.2-Dibromoethane	U I	10	\$0 U	10	1 U
Chlorobenzene	n 1	10	50 U	1 U	1 U
Ethylbenzene	10	10	20 U	110	1 U
Styrene	nı ·	1 U	50 U	1 U	1 U
1.1.2.2-Tetrachloroethane	1 U	1 U	50 U	1 U	1 U
Bromoform	10	1 U	50 U	1 U	1 U
1.3-Dichlorobenzene	10	10	20 U	1 U	1 U
1,4-Dichlorobenzene	1 0	10	20 U	1 U	1 U
1,2-Dichlorobenzene	10	10	20 U	1 U	10

•	8 MW4	8 MW4	8 MW3	8 MW3	8 MW3
∞	8-MW4-GW1 8-MW4-GW1 9605438-03 9605438-03 water vater 5/14/96 5/14/96 Composite result		8-MW3-GW1DL 9605494-08DL water 5/15/96 5/17/96	8-MW3-GW1 9605494-08 water 5/15/96 5/16/96	8-MW3-GW1 9605494-08 water \$115/96 Composite result
	В С В С	В П	8 50 U 0	1 U	1 U
	Composite result 25.0 mL	site result 25.0 mL	50 25.0 mL	1 25.0 mL	Composite result 25.0 mL

Low Level Volatile Organic Compounds					
Site	<b>6</b> 0	∞	∞	<b>6</b> 0	7
Location	MW2	MW1	MW1	MW1	MW3
Sample Depth Sample Number	8-MW2-GWI	8-MW1-GWIDL	8-MW1-GW1	8-MW1-GW1	7-MW3-GW2A
Laboratory Sample ID	9605458-01	9605494-06DL	9605494-06	9605494-06	9605494-03
Matrix	water	water	water	water	water
Date Sampled	5/14/96	5/15/96	5/15/96	5/15/96	5/15/96
Date Analyzed	5/15/96	9/11/96	9/91/5	Composite result	9/16/96
CRQL					
Chloromethane 1	1 U	20 U	1 U	10	1 0
Vinyl chloride	1 U	20 U	1 U	1 U	1 U
Bromomethane	1 U	20 U	1 U	1 U	1 U
Chloroethane	10	20 U	1 U	1 U	1 U
1,1-Dichloroethene	0.54 J	20 U	2.1	2.1	0.07 J
Acetone 1	<b>x</b>	ĸ	<b>x</b>	<b>x</b>	<b>x</b>
Carbon disuffide	10	20 U	10	1 U	1 U
Methylene chloride 2	2 U	100 U	2 U	2 U	2 U
trans-1, 2-Dichloroethene	1 U	20 U	0.63 J	0.63 J	1 U
1,1-Dichloroethane	0.3 J	14 J	16	16	n 1
cis-1,2-Dichloroethene	4.9	830	230 J	830	0.29 J
2-Butanone 5	<b>~</b>	ଧ	<b>x</b>	æ	<b>x</b>
Bromochloromethane 1	10	20 U	1 U	1 U	1 n
Chloroform	1.3	20 U	0.9 J	0.9 J	4.6
1,2-Dichloroethane	1 U	50 U	0.86 J	0.86 J	1 U
1, 1, 1-Trichloroethane	0.74 J	20 U	4.6	4.6	0.19 J
Carbon tetrachloride	n 1	20 U	0.49 J	0.49 J	<b>D 1</b>
Benzene 1	1 U	20 U	1 U	1 U	1 n
Trichloroethene 1	æ	52	55 J	52	1.1
1,2-Dichloropropane	1 U	20 U	n 1	10	n 1
Bromodichloromethane 1	1 U	20 U	1 U	1 U	0.13 J
cis-1,3-Dichloropropene	1 U	20 U	1 U	1 U	10
4-Methyl-2-pentanone	n s	250 U	5 U	n s	D S
Toluene 1	10	50 U	<b>D</b> 1	D I	D :
trans-1,3-Dichloropropene	n 1	50 U	n 1	<b>1</b>	ָם י
1,1,2-Trichloroethane	0 I	30 U	0.42 J	0.42 J	D I
Tetrachioroethene 1	11	50 U	1.8	1.8	1.9
2-Hexanone 5	n s	250 U	n <b>s</b>	n s	n s
Dibromochloromethane	1 U	20 U	1 U	1 U	1 U
1,2-Dibromoethane	1 U	20 U	1 U	1 U	1 U
Chlorobenzene	1 U	20 U	1 U	1 U	1 U
Ethylbenzene 1	10	20 U	1 U	0 I	1 U
Styrene	1 U	20 U	1 U	10	1 C
1,1,2,2-Tetrachloroethane	10	20 U	1 U	10	1 U
Bromoform 1	1 U	50 U	· 1 U	10	1 U
1,3-Dichlorobenzene	1 U	20 U	1 U	1 U	n 1
1,4-Dichlorobenzene	1 U	20 U	1 U	1 U	1 0
1,2-Dichlorobenzene	10	50 U	D C	1 U	D I

7 MW3	7-MW3-GW2A 9605494-03 water 5/15/96 5/16/96	R U 1U	1
8 MW1	8-MW1-GW1 9605494-06 water 5/15/96 Composite result	1	Composite result
8 MW1	8-MW1-GW1 9605494-06 water \$/15/96 \$/16/96	1 U	1
8 MW1	8-MW1-GW1DL 9605494-06DL water 5/15/96 5/17/96	R 50 U 0	90
8 MW2	8-MW2-GW1 9605458-01 water 5/14/96 5/15/96	R 1 U 4.3	1
Site Location Sample Depth	Sample Number Laboratory Sample ID Matrix Date Sampled Date Analyzed	1,2-Dibromo-3-chloropropane 1  Xylene (total) 1  Total TIC concentration 1  Thirte (nodes) Soil (nod 3) Wishes	Onus (vg.ng.) vol., (ug.l.) water Dilution Factor Sample Weight Wolume

Low Level Volatile Organic Compounds				
Site	7	9	9	
Location	MW3	MW3	MW1	
Sample Depth	7.10.01.2	LWD-EVINA.	CW2-1WAAA	
Jahoratora Cample ID	9605494-01	9605458-08	9608458-06	
Matrix	Water	water	Water	
Date Samuled	5/15/96	5/14/96	5/14/96	
Date Analyzed	5/16/96	5/15/96	5/15/96	
CRQL				
Chloromethane 1	1 Ω	1 U	1.0	
Vinyl chloride	1 U	1 U	10	
Bromomethane 1	1.0	1 U	10	
Chloroethane	1 U	1 U	10	
1,1-Dichloroethene	10	1 U	10	
Acetone	<b>x</b>	4.4 J	24	
Carbon disulfide 1	10	1 U	10	
Methylene chloride 2	2 U	2 U	2 U	
trans-1,2-Dichloroethene	10	1 U	1 U	
1,1-Dichloroethane	10	0.43 J	0.32 J	
cis-1,2-Dichloroethene	0.3 J	1.3	9	
2-Butanone 5	æ	2.9 J	24	
Bromochloromethane 1	1 U	10	10	
Chloroform	4.6	1 U	1 U	
1,2-Dichloroethane	10	1 U	10	
1,1,1-Trichloroethane	0.2 J	1 U	. 10	
Carbon tetrachloride	0.1 J	1 U	η η	
Benzene 1	10	0.11 J	1.0	
Trichloroethene 1	1.1	1.1	10	
1,2-Dichloropropane	10	1 U	10	
Bromodichloromethane 1	0.12 J	1 n	n n	
cis-1,3-Dichloropropene	1 1	1 U	10	
4-Methyl-2-pentanone	n <b>\$</b>	3 J	S U	
Toluene 1	10	1 U	10	
trans-1,3-Dichloropropene	10	10	1.0	
1,1,2-Trichloroethane	10	1 U	1 U	
Tetrachloroethene 1	1.9	1 U	10	
2-Hexanone 5	υs	5 U	5 U	
Dibromochioromethane 1	10	1 U	10	
1,2-Dibromoethane	10	1 U	10	
Chlorobenzene	10	1 U	10	
Ethylbenzene	10	1 0	0.14 J	
Styrene	1 0	1 0	10	
1,1,2,2-Tetrachloroethane	10	10	1.0	
Bromoform	10	10	10	
1,3-Dichlorobenzene	10	1 U	10	
1,4-Dichlorobenzene	10	1 U	10	
1,2-Dichlorobenzene	1 U	1 U	1 U	

6 MW1	6-MW1-GW2 9605458-06 water 5/14/96 5/15/96	1 U 0	
6 MW3	6-MW3-GW1 9605458-08 water 5/14/96 5/15/96	R 1 U 2.3	_
7 MW3	7-MW3-GW2 9605494-01 water \$/15/96 \$/16/96	R 1 U 0	-
Site Location Sample Depth	Sample Number Laboratory Sample ID Matrix Date Sampled Date Analyzed  CRQL	1,2-Dibromo-3-chloropropane 1 Xylene (total) 1 Total TIC concentration	Units (ug/kg) Soil, (ug/L) Water Dilution Factor

Semivolatile Organic Compounds						
Site		<b>0</b> 0	<b>60</b>	<b>6</b> 0	<b>9</b> 0	7
Location	-	MW4	MW3	MW2	MW1	MW3
Sample Depth						
Sample Number		8-MW4-GW1	8-MW3-GW1	8-MW2-GW1	8-MWI-GWI	7-MW3-GW2A
Laboratory Sample ID		9605458-03	9605494-08	9605458-01	9605494-06	9605494-03
Matrix		water	water	water	water	water
Date Sampled		5/14/96	5/15/96	5/14/96	5/15/96	5/15/96
Date Analyzed		5/23/96	5/24/96	5/24/96	5/24/96	5/24/96
	CRQL					
bis(2-Chloroethyl)ether	10	10 U				
Phenol	10	10 U				
2-Chlorophenol	10	10 U				
1,3-Dichlorobenzene	10	10 U				
1.4-Dichlorobenzene	10	10 U				
1.2-Dichlorobenzene	10	10 U				
2.2'- oxybis(1-Chloropropane)	10	10 U				
2-Methylphenot	10	10 U				
Hexachloroethane	- 01	10 U				
N-Nitroso-di-n-propylamine	10	10 U				
4-Methylphenol	10	10 U				
Nitrobenzene	10	10 U				
Isophorone	10	10 U				
2-Nitrophenol	10	10 U				
2,4-Dimethylphenol	10	10 U				
bis(2-Chloroethoxy)methane	10	10 U				
2,4-Dichlorophenol	10	10 U				
1,2,4-Trichlorobenzene	10	10 U				
Naphthalene	10	10 U				
4-Chloroaniline	10	10 U				
Hexachlorobutadiene	10	10 U				
4-Chloro-3-methylphenol	10	10 U	10 U	10 U	10 OI	10 U
2-Methylnaphthalene	10	10 U	10 U	10 U	10 Ω	10 U
Hexachlorocyclopentadiene	10	10 Ω	10 U	10 U	10 U	10 U
2,4,6-Trichlorophenol	10	10 U	10 U	10 U	10 OI	10 U
2,4,5-Trichlorophenol	25	25 U				
2-Chloronaphthalene	10	10 U				
2-Nitroaniline	25	25 U				
Acenaphthylene	10	10 U				
Dimethylphthalate	10	10 U				
2,6-Dinitrotoluene	10	10 U				
Acenaphthene	10	10 U				
3-Nitroaniline	25	25 U				
2,4-Dinitrophenol	25	25 U				
Dibenzofuran	10	10 U				
2,4-Dinitrotoluene	10	10 U				
4-Nitrophenol	25	25 U				
Fluorenc	10	10 U				

Semivolatile Organic Compounds						
Site		<b>00</b>	∞	00	•	7
Location		MW4	MW3	MW2	î MM	WM3
Sample Depth					!	
Sample Number		8-MW4-GW1	8-MW3-GW1	8-MW2-GW1	8-MW1-GW1	7-MW3-GW2A
Laboratory Sample ID		9605458-03	9605494-08	9605458-01	9605494-06	9605494-03
Matrix		water	water	water	water	water
Date Sampled		5/14/96	5/15/96	5/14/96	9/12/96	96/51/5
Date Analyzed		5/23/96	5/24/96	5/24/96	5/24/96	5/24/96
	CRQL					
4-Chlorophenyl-phenylether	10	10 U	10 U	10 U	10 U	U 01
Diethylphthalate	10	10 U	1.5	10 U	10 U	11 01
4-Nitroaniline	25	25 U				
4,6-Dinitro-2-methylphenol	25	25 U				
n-Nitrosodiphenylamine	10	10 U	10 U	10 U	10 U	D 01
4-Bromophenyl-phenylether	10	10 U	10 U	10 U	10 U	11 01
Hexachlorobenzene	10	10 U	10 U	10 U	10 U	D 01
Pentachlorophenol	25	25 U				
Phenanthrene	10	10 U	10 U	10 U	10 U	D 01
Anthracene	10	10 U	10 U	10 U	10 U	D 01
Carbazole	10	10 U	10 U	10 U	10 U	D 01
Di-n-butylphthalate	10	10 U	10 U	10 U	10 U	10 OI
Fluoranthene	10	10 U				
Pyrene	10	10 U				
Butylbenzylphthalate	10	10 U				
3,3'-Dichlorobenzidine	10	10 UJ	10 UI	10 UI	10 UJ	10 01
Benzo[a]anthracene	- 01	10 U				
Chrysene	01	10 U				
bis(2-Ethylhexyl)phthalate	01	10 U				
Di-n-octylphthalate	10	10 U				
Benzo[b]fluoranthene	01	10 U				
Benzo[k]fluoranthene	01	10 U				
Benzo[a]pyrene	10	10 U				
Indeno[1,2,3-cd]pyrene	01	10 U				
Dibenz[a,h]anthracene	10	10 U				
Benzo[g,h,i]perylene	10	10 U				
Total TIC concentration		32	22	18	35	32
Units (ug/kg) Soil, (ug/L) Water	ng/L					
Dilution Factor		1	1	1	1	-
Sample Weight/Volume	_	1000 mL				

	7	٠,	vo	
Location	MW3	MW3	MW1	
Sample Depth				
Sample Number	7-MW3-GW2	6-MW3-GW1	6-MW1-GW2	
Laboratory Sample ID	9605494-01	9605458-08	9605458-06	
Maur	Walei 5/15/05	Water 5/14/06	watel \$/14/06	
Date Sampled	56,61,6	50,405	50/4/3	
Date Analyzed CROL	_ (	06/47/6	06.47.10	
bis(2-Chloroethyl)ether 10	10 U	10 U	10 U	
10	10 U	10 U	10 U	
2-Chlorophenol	10 U	10 U	10 U	
1,3-Dichlorobenzene	10 U	10 U	10 U	
1,4-Dichlorobenzene	10 U	10 U	10 U	
1,2-Dichlorobenzene	10 U	10 U	10 U	
2,2'- oxybis(1-Chloropropane) 10	10 U	10 U	10 U	
2-Methylphenol	10 U	10 U	10 U	
Hexachloroethane 10	10 U	10 U	10 U	
N-Nitroso-di-n-propylamine 10	10 U	10 U	10 U	
4-Methylphenol	10 U	10 U	10 U	
Nitrobenzene 10	10 U	10 U	10 U	
Sophorone 10	10 U	10 U	10 U	
2-Nitrophenol	10 U	10 U	, not	
2,4-Dimethylphenol	10 U	10 U	10 U	
bis(2-Chloroethoxy)methane 10	10 U	10 U	10 U	
2,4-Dichlorophenol	10 U	10 U	10 U	
1,2,4-Trichlorobenzene		10 U	10 U	
Naphthalene 10	10 01	10 U	1 J	
4-Chloroaniline	10 U	10 U	10 U	
Hexachlorobutadiene 10	10 U	10 U	10 U	
4-Chloro-3-methylphenol	10 U	10 U	10 U	
2-Methylnaphthalene	10 U	10 U	1.3	
Hexachlorocyclopentadiene 10	10 U	10 U	10 U	
2,4,6-Trichlorophenol	10 U	10 U	10 U	
2,4,5-Trichlorophenol	25 U	25 U	25 U	
2-Chloronaphthalene	10 O	10 U	10 U	
2-Nitroaniline 25	25 U	25 U	25 U	
Acenaphthylene 10	10 U	10 U	10 U	
Dimethylphthalate 10	10 U	10 U	10 U	
		10 U	10 U	
		10 U	L I	
		25 U	25 U	
7 4-Dinitrophenol		25 11	25.11	
		11 01	1101	
iene		0.01	10 D	
4-Nitrophenol 25		25 U	25 U	
Fluorene 10	10 U	10 U	l l	

Semivolatile Organic Compounds					
		7	9	9	
Location Sample Death		MW3	MW3	MW1	
Sample Number	-	7-MW3-GW2	6-MW3-GW1	CWD-LWA-Y	
Laboratory Sample ID		9605494-01	9605458-08	9605458-06	
		water	water	water	
Date Sampled		5/15/96	5/14/96	5/14/96	
Date Analyzed	_	5/24/96	5/24/96	5/24/96	
	CRQL				
4-Chlorophenyl-phenylether	10	10 U	10 U	10 U	
Diethylphthalate	10	1.1	1 J	1 3	
4-Nitroaniline	25	25 U	25 U	1 52	
4,6-Dinitro-2-methylphenol	25	25 U	25 U	25 U	
n-Nitrosodiphenylamine	10	10 U	10 U	n 61	
4-Bromophenyl-phenylether	10	10 U	10 U	0.01	
Hexachlorobenzene	10	10 U	10 U	D 01	
Pentachlorophenol	25	25 U	25 U	25 U	
Phenanthrene	10	10 U	10 U	10 U	
Anthracene	10	10 U	10 U	10 01	
Carbazole	10	10 U	10 U	10 U	
Di-n-butylphthalate	10	10 U	10 U	10 U	
Fluoranthene	01	10 U	10 U	10 U	
	10	10 U	10 U	10 U	
Butylbenzylphthalate	10	10 U	10 U	10 U	
3,3'-Dichlorobenzidine	10	10 UJ	10 UJ	10 UJ	
Benzo[a]anthracene	10	10 U	10 U	10 U	
Chrysene	10	10 U	10 U	10 U	
bis(2-Ethylhexyl)phthalate	10	10 U	10 U	10 U	
Di-n-octylphthalate	10	10 U	10 U	10 U	
Benzo[b]fluoranthene	01	10 U	10 U	10 O	
Benzo[k]fluoranthene	10	10 U	10 U	10 U	
Benzo[a]pyrene	10	10 U	10 U	10 U	
Indeno[1,2,3-cd]pyrene	10	10 U	10 U	10 U	
Dibenz[a,h]anthracene	10	10 U	10 U	10 U	
Benzo[g,h,i]perylene	10	10 U	10 U	10 U	
Total TIC concentration	_	26	26	1418	
Units (ug/kg) Soil, (ug/L) Water	T/gu	•	,		
				<del></del> 1	
Sample weignt volume	_	1000 mL	1000 mL	1000 mL	

Inorganics	•				
Site		œ	<b>∞</b>	∞	&
Location		MW4	MW4	MW3	MW3
Sample Depth					
Sample Number		8-MW4-GW1 (Diss.)	8-MW4-GW1	8-MW3-GW1 (Diss.)	8-MW3-GW1
Laboratory Sample ID		9605458-04	9605458-03	9605494-09	9605494-08
Matrix		water	water	water	water
Date Sampled		5/14/96	5/14/96	5/15/96	5/15/96
Date Analyzed		5/24/96 - 6/4/96	5/24/96 - 6/4/96	5/24/96 - 6/4/96	5/24/96 - 6/4/96
	CRDL				
Antimony	9*	2 U	3.7 J	2 U	2.3 J
Arsenic	10	10	1 U	1 U	1 01
Barium	200	102 J	212	187 J	207
Beryllium	* 4	0.3 U	0.5 U	0.3 U	0.4 U
Cadmium	2	2 U	2 U	2.8 U	2.1 U
Chromium	10	N 9	17.6 U	12.7 U	15.4 U
Copper	25	4 U	9.7 J	4.6 J	11.9 J
Lead	3	1 U	2.5 J	1 U	2.4 J
Mercury	0.2	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	40	S U	O 6.9	5 U	6.2 U
Selenium	s	1 U	1 U	1 U	1 01
Silver	01	3 U	3 U	3 C	3 0
Thallium	*2	2 U	2 U	2 U	2 U
Zinc	20	13.7 J	69.2	458	250
Units (mg/kg) Soil, (ug/L) Water * Project-specific CRDL					

Site	•				
		∞	<b>∞</b>	<b>«</b>	ox
Location		MW2	MW2	MW1	WMI
Sample Depth					
Sample Number		8-MW2-GW1 (Diss.)	8-MW2-GW1	8-MW1-GW1 (Diss.)	8-WW1-GW1
Laboratory Sample ID		9605458-02	9605458-01	9605494-07	9605494-06
Matrix		water	water	and the state of t	00+1+001
Date Sampled		5/14/96	5/14/96	8/15/96	Water < / >
Date Analyzed		5/24/96 - 6/4/96	5/24/96 - 6/4/96	5/24/96 - 6/4/96	5/24/96 - A/4/96
	CRDL				
Antimony	9*	2 U	2 U	2 U	2.11
Arsenic	10	1 UJ	1 UJ		-
Barium	200	50.2 J	74.6 J	37.6 J	1 1 96
Beryllium	*	0.3 U	0.5 U	0.3 U	11 8:0
Cadmium	S	2 U	2.6 U	3.5 U	2.0
Chromium	10	9.5 U	12.6 U	7.1 U	Û 8.8 U
Copper	25	4 U	6.3 J	4 U	4 U
Lead	8	10	1 U	1 U	· 6.0
Mercury	0.2	0.46	0.2 U	0.2 U	0.2 U
Nickel	40	2 U	s U	5 U	D S
Selenium	S	1.2 U	1.2 U	1 U	i Ui
Silver	10	3 U	3 U	3 U	3 0
Thallium	* 2	2 UJ	2 UJ	2 U	2 U
Zinc	20	6.7 U	14.3 J	7.4 U	31.5
Units (mg/kg) Soil, (ug/L) Water * Project-specific CRDL					

Inorganics	•				
Site		7	7	7	7
Location		MW3	MW3	MW3	MW3
Sample Depth					
Sample Number		7-MW3-GW2A (Diss.)	7-MW3-GW2A	7-MW3-GW2 (Diss.)	7-MW3-GW2
Laboratory Sample ID		9605494-04	9605494-03	9605494-02	9605494-01
Matrix		water	water	water	water
Date Sampled		5/15/96	5/15/96	5/15/96	5/15/96
Date Analyzed		5/24/96 - 6/4/96	5/24/96 - 6/4/96	5/24/96 - 6/4/96	5/24/96 - 6/4/96
	CRDL				
Antimony	9*	2 U	2 U	2 U	2 U
Arsenic	10	1 U	1 U	1 U	. 1 U
Barium	200	89.4 J	138 J	91.7 J	127 J
Beryllium	* 4	0.3 U	0.5 U	0.3 U	0.4 U
Cadmium	5	2 U	2.6 U	2 U	3.5 U
Chromium	10	8.2 U	15.3 U	7.1 U	14 U
Copper	25	4 U	4.6 J	4 U	4.8 J
Lead	က	1 U	I 6.1	1 0	1.3 J
Mercury	0.2	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	4	D \$	S U	5 U	5 U
Selenium	5	1 U	1 03	1 U	1 U
Silver	10	3.0	3 U	3 U	3 U
Thallium	*2	2 UJ	2 U	2 UJ	2 U
Zinc	20	22.6	52.8	19.8 J	44.6
Units (mg/kg) Soil, (ug/L) Water * Project-specific CRDL					

morganics					
Site		9	9	9	v
Location		MW3	MW3	) NW	P I M
Sample Depth				•	T AA TAI
Sample Number		6-MW3-GW1 (Diss.)	6-MW3-GW1	6-MW1-GW2 (Diss.)	6-MW1-GW2
Laboratory Sample ID		9605458-09	9605458-08	9605458-07	9605458-06
Matrix		water	water	water	water
Date Sampled		\$/14/96	5/14/96	5/14/96	\$/14/96
Date Analyzed		5/24/96 - 6/4/96	5/24/96 - 6/4/96	5/24/96 - 6/4/96	5/24/96 - 6/4/96
	CRDL				
Antimony	9*	7 n	2 U	2 U	2.13
Arsenic	10	1 U	1 U	1 0	
Barium	200	270	350	131 J	233
Beryllium	* 4	0.3 U	0.7 U	0.3 U	D 8.0
Cadmium	٠	2.7 U	2 U	2 U	2 U
Chromium	01	Ω9	17.2 U	9.2 U	21.2 U
Copper	25	4.9 J	18.7 J	4 U	4.3 J
Lead	3	1 U	3.1	1 U	80
Mercury	0.2	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	40	8.1 U	33.7 J	5 U	5.6 U
Selenium	S	1 0	n 1	1 UJ	1 53
Silver	10	3 U	3 U	3 U	3 U
Thallium	*2	2 U	2 U	2 UJ	2 U
Zinc	20	77.4	291	8.5 U	33.3
Units (mg/kg) Soil, (ug/L) Water * Project-specific CRDL					

	_		•		•
Site		∞	<b>∞</b>	∞	œ
Location		MW4	MW3	MW2	MW1
Sample Depth					
Sample Number		8-MW4-GW1	8-MW3-GW1	8-MW2-GW1	8-MW1-GW1
Laboratory Sample ID		9605458-03	9605494-08	9605458-01	9605494-06
Matrix		water	water	water	water
Date Sampled		5/14/96	5/15/96	5/14/96	5/15/96
Date Analyzed		5/11/96 - 6/8/96	5/17-31/96	5/17-23/96	5/17-31/96
	*RL		!		
Gasoline range	0.25	0.25 U	0.25 U	0.25 U	0.25 U
Diesel range, as diesel	0.25	0.29 NJ	0.25 U	0.25 U	0.28 NJ
Oil range, as oil	_	1 U	10	10	10
JP-4	0.25	0.25 U	0.25 U	0.25 U	0.25 U
Units (mg/kg) Soil, (mg/L) Water	mg/L				
* DI - Denorting I imit					

	<b>\</b>	MM	:	6-MW1-GW2	9605458-06	Water	5/14/96	5/17-31/96		0.25 U	IN 66.0	2.3	IN Z I	
	9	MW3		6-MW3-GW1	9605458-08	water	5/14/96	5/17-31/96		0.25 U	0.25 U	1 U	0.25 U	
	7	MW3		7-MW3-GW2	9605494-01	water	5/15/96	5/23-31/96		0.25 U	0.25 U	1 U	0.25 U	
	7	MW3		7-MW3-GW2A	9605494-03	water	5/15/96	5/17-31/96		0.25 U	0.25 U	1 U	0.27 NJ	
•			<u>.</u>						* RL	0.25	0.25	1	0.25	mg/L
JP4, Gas, Diesel, Oil	Site	Location	Sample Depth	Sample Number	Laboratory Sample ID	Matrix	Date Sampled	Date Analyzed		Gasoline range	Diesel range, as diesel	Oil range, as oil	JP-4	Units (mg/kg) Soil, (mg/L) Water

Low Level Volatile Organic Compounds					
Site				1	1
Location				MW2	MW2
Sample Depth					
Sample Number		TB-H	TB-1	1-MW2-GW2A	1-MW2-GW2
Laboratory Sample ID		9605516-05	9605545-02	9605516-03	9605516-01
Matrix		water	water	water	water
Date Sampled		2/16/96	5/17/96	5/16/96	5/16/96
Date Analyzed	<u></u>	5/17/96	2/28/96	5/11/96	5/17/96
Chloromethane	2	11.1	1.0	1 U	1 U
Vinvi chloride		10	10	10	0 I
Bromomethane 1		1 U	1 U	1 U	1 U
Chloroethane 1		1 U	1 U	1 U	1 U
1,1-Dichloroethene		1 U	1 U	1 U	1 U
Acetone		1 U	10	R	æ
Carbon disulfide		1 U	1 U	1 0	1 U
Methylene chloride 2		0.24 BJ	0.21 BJ	2 U	2 U
trans-1,2-Dichloroethene		1 U	1 U	1 U	1 U
1,1-Dichloroethane		1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene		1 U	1 U	U 1	1 0
2-Butanone		S U	SU	<b>x</b>	ĸ
Bromochloromethane 1		1 U	1 U	1 U	1 U
Chloroform		1 U	1 U	1 U	1 U
1,2-Dichloroethane		1 U	1 U	1 U	1 U
1,1,1-Trichloroethane		1 U	1 U	1 U	1 U
Carbon tetrachloride		1 U	1 U	1 U	1 U
Benzene	_	1 U	1 U	n 1	1 U
Trichloroethene		1 U	1 U	1 U	1 U
1,2-Dichloropropane		1 U	1 U	1 U	1 U
Bromodichloromethane	_	1 U	1 U	1 U	1 n
cis-1,3-Dichloropropene		1 U	1 U	1 U	1 U
4-Methyl-2-pentanone		S U	s U	5 U	S U
Toluene		0.05 J	0.03 J	1 U	1 U
trans-1,3-Dichloropropene		1 U	1 U	1 U	1 U
1,1,2-Trichloroethane		1 U	1 U	1 U	1 U
Tetrachloroethene		1 U	1 U	1 U	1 U
2-Hexanone		s U	SU	5 U	S U
Dibromochloromethane		1 U	1 U	1 U	1 U
1,2-Dibromoethane		1 U	1 U	1 U	1 U
Chlorobenzene		1 U	<b>n</b> :	1 U	D I
Ethylbenzene		1 U	D :	1 0	0.1
Styrene		1 C	1 0	1 0	01
1,1,2,2-Tetrachloroethane	_	1 U	1 U	1 U	10

Site				-	-
Location				CMM	CINY
Sample Depth				7	7 M IVI
Sample Number		TB-H	TB-1	1-MW2-GW2A	1-MW2-GW2
Laboratory Sample ID	•	9605516-05	9605545-02	9605516-03	9605516-01
Matrix		water	water	water	water
Date Sampled		5/16/96	2/11/96	5/1/5	\$/14/96
Date Analyzed		5/17/96	5/28/96	5/17/96	5/17/96
	CRQL				
Bromoform	1	1 U	10	11 1	
1,3-Dichlorobenzene	-	1 U	11 1	111	-
1,4-Dichlorobenzene	_		) <u> </u>		-
1.2-Dichlorohomzone				) ;	
1,2-Dictiol Obstigette	-	0.1	n I	10	1
1,2-Dibromo-3-chloropropane	_	1 U	1 U	24	
Xylene (total)	-	1 U	10	nı	
Total TIC concentration		0	0		
Units (ug/kg) Soil, (ug/L) Water	ng/L				
Dilution Factor		1	1	_	
Sample Weight/Volume		25.0 ml	75.0 25	1 0 30	• •

Low Level Volatile Organic Compounds	
Site	
Location	MWI
Sample Depth	
Sample Number	1-MW1-GW1
Laboratory Sample ID	9605545-01
Matrix	water
Date Sampled	9/16/96
Date Analyzed	5/28/96
CRQL	11.1.1
Ciliorometriane	
Vinyl chloride 1	n
Bromomethane 1	1 U
Chloroethane 1	1 UJ
1,1-Dichloroethene	1 U
Acetone 1	<b>~</b>
Carbon disulfide 1	1 U
Methylene chloride 2	2 U
trans-1,2-Dichloroethene	1 U
1,1-Dichloroethane	10
cis-1,2-Dichloroethene	1 U
2-Butanone 5	<b>~</b>
Bromochloromethane 1	10
Chloroform	10
1,2-Dichloroethane	10
1,1,1-Trichloroethane	1 U
Carbon tetrachloride 1	1 U
Benzene 1	1 U
Trichloroethene 1	1 U
1,2-Dichloropropane	1 U
Bromodichloromethane 1	10
cis-1,3-Dichloropropene	10
4-Methyl-2-pentanone	<b>5</b> U
Toluene	1 U
trans-1,3-Dichloropropene	1 U
1,1,2-Trichloroethane	1.0
Tetrachloroethene 1	1.0
2-Hexanone 5	s u
Dibromochloromethane 1	1 U
1,2-Dibromoethane	. 1U
Chlorobenzene	1 N
Ethylbenzene	1 n
Styrene	1 U
1,1,2,2-Tetrachloroethane	1.0

|--|

MW2  MW2  1-MW2-GW2  9605516-03  9605516-03  9605516-04  960516-04  9605516-04	MW2  MW2-GW2A  1-MW2-GW2  9605516-03  9605516-03  9605516-03  960  10 U			
1-MW7-GW2A	1-MW2-GW2	MW2	MW2	MW1
######################################	9605516-01  9605516-01  9605516-01  9605516-01  960516-	A CUPS-CUIVA-1	1-MW2-GW2	1-MW1-GW1
water         water         water         stages         5/16/96         5/16/	9,16,96 5,28,96 5,28,96 5,28,96 10 U	9605516-03	9605516-01	9605545-01
\$1696         \$1696         \$1606           \$72896         \$72896         \$72896           \$10 U         10 U         10 U           \$10 U         \$10 U         10 U           \$10 U         \$10 U         \$10 U           \$2 U         \$25 U         \$25 U           \$2 U<	\$16/96 \$728/96	wafer	water	water
\$128.96         \$128.96 <t< th=""><th>100 100 100 100 100 100 100 100 100 100</th><th>\$/16/96</th><th>\$/16/96</th><th>5/16/96</th></t<>	100 100 100 100 100 100 100 100 100 100	\$/16/96	\$/16/96	5/16/96
10 U	10 U 10 U		5/28/96	5/28/96
10 U	10 U 10 U 10 U 10 U 10 U 10 U 10 U 10 U			
10 U	10 U 10 U 10 U 10 U 10 U 10 U 10 U 10 U		10 U	10 U
10 U	10 U 10 U 10 U 10 U 10 U 10 U 10 U 10 U		10 U	10 C
10 U	10 U 10 U 10 U 10 U 10 U 10 U 10 U 10 U		10 U	10 U
10 U	10 U 10 U 10 U 10 U 10 U 10 U 10 U 10 U		10 U	10 U
10 U	10 U 10 U 10 U 10 U 10 U 10 U 10 U 10 U		10 OI	10 U
10 U	10 U 10 U 10 U 10 U 10 U 10 U 10 U 10 U		10 U	10 U
10 U	10 U 10 U 10 U 10 U 10 U 10 U 10 U 10 U		10 U	10 U
10 U	10 U 10 U 10 U 10 U 10 U 10 U 10 U 10 U		10 U	10 U
10 U	10 U 10 U 10 U 10 U 10 U 10 U 10 U 10 U		11 01	101
10 U	10 U 10 U 10 U 10 U 10 U 10 U 10 U 10 U		11 01	11 01
10 U	10 U 10 U 10 U 10 U 10 U 10 U 10 U 10 U			
100 100 100 100 100 100 100 100	10 U 10 U 10 U 10 U 10 U 10 U 10 U 10 U		0.01	0.01
10 U	10 U 10 U 10 U 10 U 10 U 10 U 10 U 25 U 25 U 25 U 25 U 25 U 25 U 10 U		10 U	10 O
10 U	10 U 10 U 10 U 10 U 10 U 10 U 10 U 25 U 10 U 25 U 25 U 25 U 25 U 25 U 25 U 10 U		10 U	10 U
10 U	10 U 10 U 10 U 10 U 10 U 10 U 10 U 25 U 10 U 10 U 25 U 25 U 25 U 10 U 25 U 10 U 25 U 10 U		10 U	10 U
10 U	10 U 10 U 10 U 10 U 10 U 10 U 25 U 25 U 10 U 10 U 25 U 25 U 25 U 25 U 25 U 25 U 25 U 25		10 U	10 U
10 U	10 U 10 U 10 U 10 U 10 U 10 U 25 U 10 U 10 U 25 U 25 U 25 U 10 U 25 U 10 U 25 U 25 U 25 U 25 U		10 U	10 U
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10 U	10 U 10 U 10 U 10 U 25 U 10 U 10 U 10 U 25 U 25 U 25 U 10 U 10 U 25 U 25 U		10 U	10 U
10 U	10 U 10 U 10 U 25 U 10 U 10 U 10 U 25 U 25 U 25 U 10 U 10 U 25 U 25 U		10 U	10 U
10 U	10 U 10 U 25 U 10 U 10 U 10 U 25 U 25 U 25 U 10 U 10 U		10 U	10 U
10 U	10 U 25 U 10 U 25 U 10 U 10 U 25 U 25 U 10 U 10 U 10 U		10 01	10 U
10 U 25 U 2	10 U 25 U 10 U 10 U 10 U 10 U 25 U 25 U 10 U 10 U		11.01	10 11
25 U	25 U 10 U 10 U 10 U 10 U 25 U 25 U 10 U 10 U 10 U		11 01	11.01
25 U 10 U 25 U 10 U 10 U 10 U 10 U 10 U 25 U 25 U 25 U 26 U 27 U 10 U 10 U 10 U 28 U 28 U 28 U 28 U 28 U 28 U 10 U 10 U 10 U 28 U 28 U 10 U 10 U 28 U	25 U 25 U 10 U 10 U 10 U 25 U 25 U 10 U 10 U		11 30	1130
25 U 25 U 10 U 1	25 U 10 U 10 U 10 U 10 U 25 U 25 U 10 U 10 U		0 67	0 57
25 U 25 U 10 U 10 U 10 U 10 U 10 U 10 U 25 U 25 U 25 U 10 U 10 U 10 U 10 U 25 U 25 U 25 U 25 U 25 U 25 U 25 U 25 U 25 U 26 U 25 U	25 U 10 U 10 U 10 U 25 U 25 U 10 U 10 U		10 U	10 U
10 U 10 U 10 U 10 U 10 U 10 U 10 U 25 U 25 U 25 U 10 U 10 U 25 U 2	10 U 10 U 10 U 10 U 25 U 25 U 10 U 10 U		25 U	25 U
10 U 10 U 10 U 10 U 25 U 25 U 25 U 10 U 10 U 10 U 25 U 25 U 25 U 25 U	10 U 10 U 25 U 25 U 10 U 10 U 10 U		10 U	10 U
10 U 10 U 10 U 10 U 25 U 25 U 25 U 25 U 10 U 10 U 25 U 25 U	10 U 10 U 25 U 25 U 10 U 10 U 25 U		10 U	10 U
25 U 10 U 25 U 25 U 25 U 10 U 10 U 25 U 2	25 U 25 U 25 U 10 U 25 U		11 01	10 11
25 U 25 U 25 U 25 U 10 U 10 U 25 U 2	25 U 25 U 10 U 10 U 25 U			
25 U 25 U 25 U 25 U 10 U 10 U 25 U 25 U	25 U 25 U 10 U 10 U 25 U		0.01	0.77
25 U 25 U 10 U 10 U 10 U 10 U 25 U 25 U	25 U 10 U 10 U 25 U		25 U	25 U
10 U 10 U 10 U 10 U 25 U 25 U	10 U 10 U 25 U		25 U	25 U
10 U 10 U 25 U 25 U	10 U 25 U		10 U	10 U
25 U 25 U	25 U		10 U	10 U
	11.01		25 U	25 U
11.01			1101	1101

		MW1		1-MW1-GW1	9605545-01	water	96/91/S	30,301 / 30,300 / 30,	20,021	10 17		11 5%	35 11	10 n	U 01	U 0 I	25 U	10 U	10 U	D 01		10 U	10 U	10 U	10 U	10 U	10 U	1.5	10 U	10 U	10 U	U 01	10 U	10 U	10 U	27			
	-	MW2		1-MW2-GW2	9605516-01	water	\$/16/96	5/28/96		10 U	10 U	25 U	25 U	10 U	10 U	10 U	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1 1	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0		1	
	-	MW2		1-MW2-GW2A	9605516-03	water	5/16/96	5/28/96		10 U	10 U	25 U	25 U	10 U	10 U	10 U	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1.5	10 O	10 U	10 U	10 U	10 U	10 U	10 U	0		1	
Semivolatile Organic Compounds	Site	Location	Sample Depth	Sample Number	Laboratory Sample ID	Matrix	Date Sampled	Date Analyzed	CRQL	4-Chlorophenyl-phenylether 10	Diethylphthalate 10	4-Nitroaniline 25	4,6-Dinitro-2-methylphenol	n-Nitrosodiphenylamine 10	4-Bromophenyl-phenylether 10	Hexachlorobenzene 10	enol	Phenanthrene 10	Anthracene 10	Carbazole 10	Di-n-butylphthalate 10	Fluoranthene 10	Pyrene 10		ine	Benzo[a]anthracene 10	Chrysene 10	bis(2-Ethylhexyl)phthalate 10			thene			<u>u</u>	Benzolg,h,i]perylene	Total TIC concentration	Units (ug/kg) Soil, (ug/L) Water ug/L	Dilution Factor	

inorganics	•				
Site		-	1	1	1
Location		MW2	MW2	MW2	MW2
Sample Depth					
Sample Number		1-MW2-GW2A (Diss.)	1-MW2-GW2A	1-MW2-GW2 (Diss.)	1-MW2-GW2
Laboratory Sample ID		9605516-04	9605516-03	9605516-02	9605516-01
Matrix		water	water	water	water
Date Sampled		5/16/96	5/16/96	5/16/96	5/16/96
Date Analyzed		5/30/96 - 6/17/96	5/30/96 - 6/17/96	5/30/96 - 6/17/96	5/30/96 - 6/17/96
	CRDL				
Antimony	9*	2 UJ	2 UJ	2 UJ	2 UJ
Arsenic	10	1 U	10	1 U	1 U
Barium	200	83.2 J	104 J	82.8 J	115 J
Beryllium	*	0.3 U	0.3 U	0.3 U	0.4 J
Cadmium	\$	2 U	2 U	2 U	2 U
Chromium	10	Ω9	Ω9	Ω9	l 6
Copper	25	4 U	4 U	4 U	4 J
Lead	3	1 U	1 U	1 U	10
Mercury	0.2	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	40	n \$	5 U	5 U	SU
Selenium	\$	f 6'9	7.5 J	5.4 UJ	13.5 J
Silver	10	3 U	3 U	3 U	3 U
Thallium	* 2	2 UJ	2 UJ	2 UJ	2 UJ
Zinc	20	18.8 U	27.9	18.4 U	31.1
Units (mg/kg) Soil, (ug/L) Water * Project-specific CRDL	ng/L				

	_	MW1		1-MW1-GW1	9605545-01	water	5/16/96	5/20/96 - 6/8/96		0.25 U	0.35 NJ	1 U	0.25 U	
	-	MW2		1-MW2-GW2	9605516-01	water	\$/16/96	5/20/96 - 6/8/96		0.25 U	0.25 U	1 U	0.25 U	
	-	MW2		1-MW2-GW2A	9605516-03	water	5/16/96	2/20/96 - 6/8/96		0.25 U	0.25 U	1 U	0.25 U	
,								•	* RL	0.25	0.25	_	0.25	mg/L
JP4, Gas, Diesel, Oil	Site	Location	Sample Depth	Sample Number	Laboratory Sample ID	Matrix	Date Sampled	Date Analyzed		Gasoline range	Diesel range, as diesel	Oil range, as oil	JP-4	Units (mg/kg) Soil, (mg/L) Water * RL - Reporting Limit

Low Level Volatile Organic Compounds					
Site					
Location					
Sample Depth					
Sample Number	TB-F	TB-E	TB-D	TB-C	TB-B
Laboratory Sample ID	9607404-15	9607404-20	9607404-05	9607404-10	9607375-03
Matrix	water	water	water	water	water
Date Sampled	2/10/96	7/10/96	7/10/96	7/10/96	96/6/1
Date Analyzed	7/17/96	7/17/96	7/17/96	7/17/96	7/11/96
Chloromethane	10	1 U	1 U	1 U	1 U
Vinvl chloride	1 U	1 U.	1 U	10	1.0
bromomethane	1 U	10	10	10	1 U
Chloroethane	1 U	nı	1 U	1 U	1 U
1.1-Dichloroethene	1 U	10	1 U	1 U	1 U
Acetone 5	3 U	n s	n s	s u	5 U
Carbon disulfide	1 U	n ı	10	1 U	1 0
Methylene chloride 2	0.26 BJ	0.15 BJ	2 U	2 U	2 U
trans-1.2-Dichloroethene	1 U	1 U	10	1 U	10
1,1-Dichloroethane	10	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	10	1 U	1 U	10	1 U
2-Butanone 5	D S	2 U	s U	5 U	9 U
Bromochloromethane 1	1 U	1.0	1 U	1 U	1 n
Chloroform	10	1 U	1.0	1 U	1 U
1,2-Dichloroethane	10	1 U	1 U	1 U	0 I
1,1,1-Trichloroethane	1 U	1 U	10	1 U	1 U
Carbon tetrachloride	10	1 U	1 U	1 U	η η
Benzene	1 U	1 U	1 U	<b>D</b> [	10
Trichloroethene 1	1 U	D.I	<b>D</b> ;	D :	n:
1,2-Dichloropropane	D I	10	0.1	01:	01.
Bromodichloromethane 1	D :	0.1	1.0	); 	o :
cis-1,3-Dichloropropene	10	01	); 	o;	
4-Methyl-2-pentanone	0.5	)	); ,		
Toluene	 	0.:	0;	); ;	
trans-1,3-Dichloropropene	);		) : 		0.1
1,1,2-1 richloroethane	) : -		) <del> </del>	)	0 -
Terractuoroemene	. i				) <b>!</b>
Z-Hexanone	20	)	D 1	D.	10
Diptomodiant in the state of th		11.		111	111
1,2-Dibromoethane	0 1				
Chlorobenzene	o ;	o :			
Ethylbenzene	0;				
Styrene					
1,1,2,2-Tetrachloroethane	0 :	0.1	o:	) ;	
Bromoform	01	0;	0;		
1,3-Dichlorobenzene	01.	0;	) ;		
1,4-Dichlorobenzene	0.1	2	) -	<b>)</b>	) -

Low Level Volatile Organic Compounds	sp					
Site Location Sample Depth Sample Number Laboratory Sample ID Matrix Date Sampled Date Analyzed	CROL	TB-F 9607404-15 water 7/10/96 7/17/96	TB-E 9607404-20 water 7/10/96	TB-D 9607404-05 water 7/10/96	TB-C 9607404-10 water 7/10/96	TB-B 9607375-03 water 7/1/9/96
1,2-Lychlorobenzene		1 U	1 U	1 U	1 U	1 U
Xylene (total)		10	1 n	10	D:	10
Total TIC concentration		0	0	) - C	) ·	n •
Units (ug/kg) Soil, (ug/L) Water Dilution Factor Sample Weight/Volume	J/Bn	1 25.0 mL	1 25.0 mL	1 25.0 mL	1 25.0 mL	1 25.0 mL

Low Level Volatile Organic Compounds					
Site		•	90	<b>0</b> 0	•
Location		MW3	MW3	MW3	MW2A
Sample Depth Sample Number	TB-A	8-MW3-GW2DL	8-MW3-GW2	8-MW3-GW2	8-MW2A-GW2
Laboratory Sample ID	9607375-08	9607404-13DL	9607404-13	9607404-13	9607404-18
Matrix	water	water	water	water	water
Date Sampled	96/6/L	7/10/96	7/10/96	7/10/96	7/10/96
Date Analyzed	96/11/1	1/18/96	7/17/96	Composite result	7/17/96
CRQL		11 00		1 -	1 21 0
Chloromethane		0.07	1 000	1 200	116.
Vinyl chloride		0.02	6.20	6 97.0	
bromometnane		2007	)	) <del>[</del>	
1 1-Dichloroethene		2.2 J	3.1	3.1	0.41 J
Acetone	ns	. x	24	<b>~</b>	2
Carbon disulfide	10	20 U	n I	1 U	1.0
Methylene chloride 2	0.27 BJ	40 U	2 U	2 U	2 U
trans-1,2-Dichloroethene	1 U	20 U	0.31 J	0.31 J	1 U
1,1-Dichloroethane	10	9.4 J	12	12	0.23 J
cis-1,2-Dichloroethene	10	420	360 J	420	2.3
2-Butanone 5	su	ĸ	<b>x</b>	껖	R.
Bromochloromethane 1	1 U	20 U	1 0	10	1 0
Chloroform	10	3 1	3.4	3.4	0.79 J
1,2-Dichloroethane 1	n 1	20 U	10	1 O	1 U
1,1,1-Trichloroethane	DI	3.4 J	3.9	3.9	0.58 J
Carbon tetrachloride 1	10	20 U	0.33 J	0.33 J	01.
Benzene	10	20 U	01.	0.1	o .
Trichloroethene 1	0.21 J	25	31 5	25	
1,2-Dichloropropane	ם:	20 U		10	
Bromodichtoromethane 1	<u> </u>	70 07	t 91.0	0.16	);
cis-1,3-Dichloropropene	10	20 C	01		
4-Methyl-2-pentanone	06.	0.001	٠. ١	) r	) •
I oluene		2002	11.1	11.1	11.1
tricklessethere		20 27			
Tetrachloroethene		20 O	n I	D.	
2-Hexanone 5	D S	<b>.</b>	~	<b>x</b>	×
Dibromochloromethane	1 U	20 U	1 U	1 U	1 U
1.2-Dibromoethane	1 U	20 U	10	UI	10
Chlorobenzene	10	20 U	1 U	1 U	1 U
Ethylbenzene 1	10	20 U	1 U	1 U	1 U
Styrene	10	20 U	10	1 U	1 U
1,1,2,2-Tetrachloroethane	1 U	20 U	1 U	1 U	1 U
Bromoform 1	10	20 U	1 0	1 U	1 n
1,3-Dichlorobenzene	1 U	20 U	n 1	n 1	1 U
1,4-Dichlorobenzene	10	2.2 J	0.79 J	0.79 J	0.77 J

Low Level Volatile Organic Compounds	şp					
Site			***	∞	œ	~
Location			MW3	MW3	MW3	S CANA
Sample Depth						V7.WW
Sample Number		TB-A	8-MW3-GW2DL	8-MW3-GW2	8-MW3-GW2	8-MW2A-GW2
Laboratory Sample ID		9607375-08	9607404-13DL	9607404-13	9607404-13	9607404-18
Matrix		water	water	water	water	water
Date Sampled		96/6/L	7/10/96	7/10/96	2/10/96	7/10/96
Date Analyzed	<del></del>	7/11/96	7/18/96	7/17/96	Composite result	7/11/96
	CRQL				J	
1,2-Dichlorobenzene	-	1 U	20 U	1 U	10	
1,2-Dibromo-3-chloropropane	-	10	20 U	10		) =
Xylene (total)	1	1 U	20 U	D I		
Total TIC concentration		0	0	. 0	)	
Units (ug/kg) Soil, (ug/L) Water	ng/L					
Dilution Factor			20	-	Composite result	-
Sample Weight/Volume		25.0 mL	25.0 mL	25.0 mL	25.0 mL	25.0 mL

Low Level Volatile Organic Compounds						
Site		∞	œ	••	<b>∞</b>	7
Location		MW2	MW1	MW1	MW1	MWS
Sample Depth						
Sample Number		8-MW2-GW2	8-MW1-GW2	8-MW1-GW2	8-MW1-GW2	7-MW5-GW2
Laboratory Sample ID		9607404-16	9607404-11DL	9607404-11	9607404-11	9607375-01
Matrix		water	water	water	water	water
Date Sampled		2/10/96	7/10/96	2/10/96	7/10/96	96/6/L
Date Analyzed		2/18/96	7/23/96	96/L1//	Composite result	7/11/96
	CRQL					
Chloromethane	1	1 υ	20 D	1 U	1 U	1 U
Vinyl chloride	_	1 U	50 U	1 U	1 U	11
bromomethane	_	10	50 U	1 U	1 U	1 U
Chloroethane	-	1 U	50 U	1 U	1 U	1 U
1, 1-Dichloroethene		0.43 J	50 U	1.5	1.5	1 1
Acetone	2	~	<b>x</b>	æ	<b>~</b>	R
Carbon disulfide	_	1 U	50 U	1 U	1 U	10
Methylene chloride	2	2 U	100 U	2 U	2 U	2 U
trans-1,2-Dichloroethene	-	1 0	\$0 U	0.15 J	0.15 J	1 U
1, 1-Dichloroethane	1	0.24 J	12 J	9.6	9.6	1 U
cis-1,2-Dichloroethene	_	2.6	630	340 J	630	1 0
2-Butanone	2	~	ଧ	<b>x</b>	<b>~</b>	æ
Bromochloromethane	_	1 U	50 U	10	1 U	1 U
Chloroform	1	0.87 J	50 U	0.95 J	0.95 J	1 U
1,2-Dichloroethane	-	1 0	50 U	10	1 U	1 U
1, 1, 1-Trichloroethane		0.68 J	50 U	2.9	2.9	1 U
Carbon tetrachloride		1 N	50 U	0.33 J	0.33 J	1 U
Benzene		1 U	50 U	1 U	1 U	0.34 J
Trichloroethene	-	1.2	50 U	23	23	1 U
1,2-Dichloropropane	1	1 U	50 U	1 U	1 U	1 U
Bromodichloromethane		1 U	20 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	-	1 U	20 U	1 U	1 U	1 U
4-Methyl-2-pentanone	\$	8 U	250 U	s U	0 <b>\$</b>	s u
Toluene	_	2.2	50 U	1.6	1.6	0.29 J
trans-1,3-Dichloropropene	_	1 U	20 U	1 U	1 U	1 U
1,1,2-Trichloroethane	-	1 U	50 U	0.13 J	0.13 J	10
Tetrachloroethene	-	3.3	20 U	2.4	2.4	1 U
2-Hexanone	5	~	<b>x</b>	ଧ	æ	<b>x</b>
Dibromochloromethane		1 U	20 U	1 U	1 U	10
1,2-Dibromoethane	_	1 U	20 U	1 U	1 U	1 U
Chlorobenzene	-	1 U	20 U	0.1 J	0.1 J	1 0
Ethylbenzene	-	1 U	20 U	1 U	1 U	0.3 J
Styrene	-	10	20 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	-	1 U	50 U	1 U	1 U	1 U
Bromoform		1 U	20 U	10	1 U	1 U
1,3-Dichlorobenzene	_	1 U	50 U	10	10	1 U
1,4-Dichlorobenzene	_	0.85 J	20 U	0.98 J	0.98 J	0.41 J

		8	∞	8	•	
Location Sample Depth		MW2	MW1	MW1	MWI	MWS
Sample Number		8-MW2-GW2	8-MW1-GW2	8-MW1-GW2	8-MW1-GW2	7-MW5-GW2
Laboratory Sample ID		9607404-16	9607404-11DL	9607404-11	9607404-11	9607375-01
Matrix		water	water	water	water	T A
Date Sampled		7/10/96	7/10/96	7/10/96	96/01/2	96/6/2
Date Analyzed		7/18/96	7/23/96	7/11/96	Composite result	7117
	CRQL					
1,2-Dichlorobenzene	1	1 U	50 U	1 U	11.1	
1,2-Dibromo-3-chloropropane	-	1 U	S0 U	1 0		
Xylene (total)	-	1 U	50 U	111		
Total TIC concentration		0	0	)		Ö
Units (ug/kg) Soil, (ug/L) Water	ng/L					
Dilution Factor		-	50	-	Commonite secult	
Sample Weight/Volume		25.0 mL	I 0 \$C		Composite result	

Low Level Volatile Organic Compounds					
Site	7	7	7	9	9
Location	MW2	MW2	MW2	MW3A	MW3
Sample Depth					
Sample Number	7-MW2-GW2DL	7-MW2-GW2	7-MW2-GW2	6-MW3A-GW2	6-MW3-GW2
Laboratory Sample ID	9607375-06DL	9607375-06	9607375-06	9607404-03	9607404-01
Matrix	water	water	water	water	water
Date Sampled	96/6/L	1/9/96	96/6/L	7/10/96	7/10/96
Date Analyzed CRO!	1/18/96	7/11/96	Composite result	96/11/1	2/18/96
Chloromethane	2 U	1 U	10	10	l U
Vinyl chloride 1	2 U	1 U	1 U	10	1 U
bromomethane 1	2 U	1 n	1 U	1 U	1 U
Chloroethane	2 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	2 U	1 U	1 U	1 U	1 U
Acetone 5	<b>x</b>	æ	ଧ	<b>ય</b>	ਖ
Carbon disulfide	2 U	1 U	1 U	1 U	1 U
Methylene chloride 2	4 U	2 U	2 U	2 U	2 U
trans-1,2-Dichloroethene	2 U	10	1 U	10	10
1,1-Dichloroethane	2 U	1 U	1 U	0.3 J	0.28 J
cis-1,2-Dichloroethene	2 U	1 U	1 0	0.21 J	0.24 J
2-Butanone 5	м	ଧ	×	R	<b>x</b>
Bromochloromethane 1	2 U	1 U	1 U	10	1 U
Chloroform	2 U	1 n	1 U	1 U	1 U
1,2-Dichloroethane	2 U	1 U	1 U	10	1 U
1, 1, 1-Trichloroethane	2 U	1 U	10	10	1 U
Carbon tetrachloride	2 U	1 U	1 U	10	n I
Benzene 1	3.4	4.1	4.1	1 0	1 0
Trichloroethene 1	2 U	1 U	10	0.28 J	0.34 J
1,2-Dichloropropane	2 U	1 U	1 n	U I	<b>D</b> :
Bromodichloromethane 1	2 U	ם י	10	D :	01
cis-1,3-Dichloropropene	2 U	1 C	ן מ ה	10	D
4-Methyl-2-pentanone	10 t	D s	S C	n s	5.0
Toluene 1	2 U	0.11 J	0.11 J	1.2	0.92 J
trans-1,3-Dichloropropene	2 U	1 U	1 U	10	10
1,1,2-Trichloroethane	2 U	10	n I	1 U	1 U
Tetrachloroethene 1	2 U	1 U	n 1	1 U	n <b>1</b>
2-Hexanone 5	R	<b>x</b>		R	æ
Dibromochloromethane 1	2 U	1 U	1 U	1 U	n i
1,2-Dibromoethane	2 U	1 U	1 U	1 U	1 U
Chlorobenzene	2 U	1 U	1 U	1 U	1 U
Ethylbenzene 1	61	25	25	1 U	10
Styrene 1	2 U	0.19 J	0.19 J	1 U	1 U
1,1,2,2-Tetrachloroethane	2 U	1 U	1 U	1 U	n I
Bromoform 1	2 U	U I	1 U	1 U	1 U
1,3-Dichlorobenzene	2 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	2 U	0.1 J	0.1 J	1.1	1.1

Site Location Sample Depth		7 MW2	7 MW2	7 MW2	6 MW3A	6 MW3
Sample Number Laboratory Sample ID		7-MW2-GW2DL 9607375-06DL	7-MW2-GW2 9607375-06	7-MW2-GW2 9607375-06	6-MW3A-GW2 9607404-03	6-MW3-GW2
Matrix Date Sampled		water 7/0/05	water	water	water	Water
Date Analyzed		7/18/96	7/17/96	7/9/96 Composite result	7/10/96	7/10/96
	CRQL					6/01//
1,2-Dichlorobenzene	1	2 U	1 U	1 U	11.	
1,2-Dibromo-3-chloropropane		2 U	nı	111		
Xylene (total)		49	65 J	67		
Total TIC concentration	-	88	116	<b>:</b>	)	•
Units (ug/kg) Soil, (ug/L) Water	ng/L				>	
Dilution Factor	)	2	_	Composite result	-	•
Sample Weight/Volume		74.0.30	4 .	Composite resuit	-	-

-	I AMIZ	MW2	1-MW2-GW3	9607375-04	1/9/96	7/17/96	111		n I	זנ	1 U	ĸ	1 U	2 U	1 U	1 n	O	x -	o n	10	10	0.14.7	10	1.0	10	5 D S	0.32 J	• • •	1.0	0 0 :		100 100 100 100	100 100 100 100 100		100 100 100 100 100	100 100 100 100 100 100	100 100 100 100 100 100	100 100 100 100 100 100
v	9	MW1	6-MW1-GW3	9607404-06	7/10/96	7/1//6	11 [	011	n i	10	1 U	~	1 U	2 U	1 U	0.1 J	1.1	¥ :		10	1 U	0.1	1 U	1 U	D:	2	10	1.0		0.17 J	0.17 J	0.17 J 1 U R	0.17 J 1 U R 1 U	0.17 J 1 U 1 U 1 U	0.17 J 1 U 1 U 1 U 1 U 9	0.17 1 1 U U U U U U U U U U U U U U U U U U	0.17 J 1 U 1 U 1 U 1 U 1 U 1 U	0.17 J 1 U 1 U 1 U 1 U 1 U 1 U 1 U
V	9	MW2	6-MW2-GW2	9607404-08	7/10/96	7/18/96	111		n -		10	~	10	2 U	1.0	0.11 J	n I	2 i		10	υι		0.16 J	10	D:	0 5	0.26 J	1 U		10	10	11 U U U U U U U U U U U U U U U U U U	11 UU U	11 UU UU I	11 U U U U U U U U U U U U U U U U U U	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		D 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
							L																					_	-	_								

1 MW2	1-MW2-GW3 9607375-04 water 7/9/96 7/17/96	1 U 1 U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1
6 MW1	6-MW1-GW3 9607404-06 water 7/10/96	1 U 1 U 10 90	1 250 1
6 MW2	6-MW2-GW2 9607404-08 water 7/10/96 7/18/96	1 U 1 U 1 U	1 25.0 mT
Site Location Sample Depth	Sample Number Laboratory Sample ID Matrix Date Sampled Date Analyzed CRQL		Units (ug/kg) Soul, (ug/L) Water ug/L Dilution Factor Sample Weight/Volume

Semivolatile Organic Compounds	•					1
Site		••	••	∞	00	7
Location		MW3	MW2A	MW2	MW1	MW5
Sample Depth					:	
Sample Number	-	8-MW3-GW2	8-MW2A-GW2	8-MW2-GW2	8-MW1-GW2	7-MWS-GW2
Laboratory Sample ID		9607404-13	9607404-18	9607404-16	9607404-11	9607375-01
Matrix		water	water	water	wafer	water
Date Sampled		7/10/96	7/10/96	7/10/96	4/10/96	2/9/96
Date Analyzed		7/23/96	7/23/96	-7/23/96	7/23/96	7/22/96
	CKCL Signal	11 01	11 01	11 01	11 01	11 01
bis(2-Chloroethyl)ether	2 :			0 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	500	) (1 (1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
Phenol	21 :	) i				
2-Chlorophenol	- 01	10 U	10 D	0.01	0.01	) or
1,3-Dichlorobenzene	10	10 U	10 0	D 01	0.01	0.01
1,4-Dichlorobenzene	10	10 U	10 U	10 01	D oI	0.01
1,2-Dichlorobenzene	10	10 U	10 U	10 U	10 O	D 01
2,2'- oxybis(1-chloropropane)	10	10 U	10 U	10 U	10 U	10 U
2-Methylphenol	10	10 U	10 U	10 U	10 U	1 J
Hexachloroethane	10	10 U	10 U	10 U	10 U	10 U
N-Nitroso-di-n-propylamine	10	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	10	10 U	10 U	10 U	10 O	10 U
Nitrobenzene	10	10 U	10 U	10 U	10 U	10 U
Isophorone	10	10 U	10 U	10 U	10 U	10 U
2-Nitrophenol	10	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	01	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	10	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	10	10 U	10 U	10 U	1 <b>0</b> 1	10 U
1,2,4-Trichlorobenzene	10	10 U	10 U	10 U	10 U	10 U
Naphthalene	10	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	10	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	10	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	10	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	10	10 U	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	10	10 U	10 U	10 U	10 U	10 U
2,4,6-Trichlorophenol	10	10 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	25	25 U	25 U	25 U	25 U	2 <b>5</b> U
2-Chloronaphthalene	10	10 U	10 U	10 U	10 O	10 U
2-Nitroaniline	22	25 U	25 U	25 U	25 U	25 U
Acenaphthylene	10	10 U	10 U	10 U	10 U	10 U
Dimethylphthalate	10	10 U	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	10	10 U	10 U	10 U	10 U	10 U
Acenaphthene	10	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline	25	25 U	25 U	25 U	25 U	25 U
2,4-Dinitrophenol	25	25 U	25 U	25 U	25 U	25 U
Dibenzofuran	10	10 U	D 01	10 U	10 OI	10 U
2,4-Dinitrotoluene	10	10 U	10 U	10 U	10 U	10 U
4-Nitrophenol	25	25 U	25 U	25 U	25 U	25 U

Semivolatile Organic Compounds						
Site		&	8	800	œ	۲
Location Sample Depth		MW3	MW2A	MW2	MWI	, MW5
Sample Number		8-MW3-GW2	8-MW2A-GW2	8-MW2-GW2	8-MW1-GW2	7-MW5-GW2
Laboratory Sample ID		9607404-13	9607404-18	9607404-16	9607404-11	9607375-01
Matrix		water	water	water	water	water
Date Sampled		96/01/L	2/10/96	7/10/96	2/10/96	96/6/L
Date Analyzed	_ IO&D	7/23/96	7/23/96	7/23/96	7/23/96	7/22/96
Fluorene	10	10 U	10 U	10 11	11 01	10.1
4-Chlorophenyl-phenylether	10	10 U	10 U	11 01	11 01	5 P
Diethylphthalate	10	10 U	10 U	10 U	D 01	101
4-Nitroaniline	25	25 U	25 U	25 U	25 U	25 U
4,6-Dinitro-2-methylphenol	25	· 25 U	25 U	25 U	25 U	25 U
n-Nitrosodiphenylamine	10	10 U	10 U	10 U	10 U	10 OI
4-Bromophenyl-phenylether	10	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	10	10 O	10 U	10 U	10 U	10 U
Pentachlorophenol	25	2 <b>5</b> U	25 U	25 U	25 U	25 U
Phenanthrene	10	10 U	10 U	10 U	10 U	10 U
Anthracene	10	10 U	10 U	10 U	10 U	10 U
Carbazole	10	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate	10	10 U	10 U	10 U	10 U	10 U
Fluoranthene	10	10 U	10 U	10 U	10 U	10 U
Pyrene	10	10 U	10 U	10 U	10 U	10 U
Butylbenzylphthalate	10	10 U	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	10	10 U	10 U	10 U	10 U	10 U
Benzo[a]anthracene	10	10 U	10 U	10 U	10 U	10 U
Chrysene	10	10 U	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	10	10 U	10 U	10 U	10 U	10 U
Di-n-octylphthalate	10	10 U	10 U	10 U	10 U	10 U
Benzo[b]fluoranthene	10	10 U	10 U	10 U	10 U	10 U
Benzo[k]fluoranthene	10	10 U	10 U	10 U	10 U	10 U
Benzo[a]pyrene	10	10 U	10 U	10 U	10 U	10 U
Indeno[1,2,3-cd]pyrene	10	10 U	10 U	10 U	10 U	10 U
Dibenz[a,h]anthracene	- 01	10 U	10 U	10 U	10 U	10 U
Benzo[g,h,i]perylene	10	10 U	10 U	10 U	10 U	10 U
I otal TIC concentration		2	80	82	45	193
Units (mg/kg) Soil, (ug/L) Water	ng/L			,		
Dilution Factor		1	- :	-	1	
Sample Weight Volume	_	1000 mL	1000 mL	1000 mL	1000 mL	1000 mL

Semivolatile Organic Compounds	-					
Site		7	vo	9	9	9
Location		MW2	MW3A	MW3	MW2	MW1
Sample Depth						
Sample Number		7-MW2-GW2	6-MW3A-GW2	6-MW3-GW2	6-MW2-GW2	6-MW1-GW3
Laboratory Sample ID		9607375-06	9607404-03	9607404-01	9607404-08	9607404-06
Matrix		water	water	water	water	water
Date Sampled		2/6/6/	96/01/L	7/10/96	7/10/96	96/01//
Date Analyzed		7/22/96	7/22/96	7/22/96	7/23/96	7/22/96
his/2-Chloroethy/bether	10	10 U				
	. 01	10 O	10 U	10 U	10 U	10 U
2-Chlorophenol	10	10 U				
1.3-Dichlorobenzene	10	10 U	10 D	10 U	10 OI	10 U
1.4-Dichlorobenzene	10	10 U	10 U	10 U	10 U	10 OI
1,2-Dichlorobenzene	10	10 U	10 U	10 U	10 OI	10 U
2.2'- oxybis(1-chloropropane)	01	10 U				
2-Methylphenol	10	1.3	10 U	10 U	10 U	10 U
Hexachloroethane	10	10 U				
N-Nitroso-di-n-propylamine	10	10 U				
4-Methylphenol	10	10 U				
Nitrobenzene	10	10 U				
Isophorone	10	10 U				
2-Nitrophenol	10	10 U				
2,4-Dimethylphenol	10	10 U				
bis(2-Chloroethoxy)methane	10	10 U				
2,4-Dichlorophenol	10	10 U				
1,2,4-Trichlorobenzene	10	10 U				
Naphthalene	10	10 U	10 U	10 U	10 U	1 1
4-Chloroaniline	10	10 U				
Hexachlorobutadiene	10	Ω 01	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	10	10 U				
2-Methylnaphthalene	10	10 U				
Hexachlorocyclopentadiene	10	10 U				
2,4,6-Trichlorophenol	10	10 U				
2,4,5-Trichlorophenol	25	25 U				
2-Chloronaphthalene	10	10 U				
2-Nitroaniline	22	25 U				
Acenaphthylene	91	10 U				
Dimethylphthalate	10	10 U				
2,6-Dinitrotoluene	10	10 U				
Acenaphthene	10	10 U	10 U	10 U	10 U	1 J
3-Nitroaniline	25	25 U				
2,4-Dinitrophenol	25	25 U				
Dibenzofuran	10	10 U	10 U	10 U	10 U	1.3
2,4-Dinitrotoluene	10	10 U				
4-Nitrophenol	25	25 U				

Semivolatile Organic Compounds						
Site	_	7	9	ν.	4	
Location		MW2	MW3A	MW3	MW2	MW.
Sample Depth					1	¥
Sample Number		7-MW2-GW2	6-MW3A-GW2	6-MW3-GW2	6-MW2-GW2	6-MW1-GW3
Laboratory Sample ID		9607375-06	9607404-03	9607404-01	9607404-08	9607404-06
Matrix		water	water	water	water	water
Date Sampled		96/6/L	7/10/96	7/10/96	7/10/96	96/01/2
Date Analyzed		7/22/96	7/22/96	7/22/96	7/23/96	7/22/96
	CRQL		ĺ			
Fluorene	10	10 U	10 U	10 U	10 U	I
4-Chlorophenyl-phenylether	10	10 U	10 U	10 U	10 U	Ti Ot
Diethylphthalate	10	10 U	10 U	10 U	D 01	11 01
4-Nitroaniline	25	25 U				
4,6-Dinitro-2-methylphenol	25	25 U	25 U	25 U	25 U	25 11
n-Nitrosodiphenylamine	10	10 U	10 U	10 U	10 U	D 01
4-Bromophenyl-phenylether	10	10 U	10 U	10 U	10 U	D 01
Hexachlorobenzene	10	10 U				
Pentachlorophenol	25	25 U				
Phenanthrene	10	10 U	10 U	10 U	10 U	1 J
Anthracene	10	10 U	10 U	10 U	10 U	1 J
Carbazole	10	10 U				
Di-n-butylphthalate	10	1.3	10 U	1.5	10 U	10 U
Fluoranthene	10	10 U	10 U	10 U	10 U	1.3
Pyrene	10	10 U				
Butylbenzylphthalate	10	10 U				
3,3'-Dichlorobenzidine	10	10 U				
Benzo[a]anthracene	- 01	10 U				
Chrysene	- 01	10 U				
bis(2-Ethylhexyl)phthalate	- 01	10 U	10 U	10 U	10 OI	10 U
Di-n-octylphthalate	- 10	10 U	10 U	10 U	10 OI	10 U
Benzo[b]Iluoranthene	- 01	10 U				
Benzo[k]fluoranthene	10	10 U	10 U	10 U	10 OI	10 U
Benzolalpyrene	10	10 U				
Indeno[1,2,3-cd]pyrene	10	10 U				
Dibenz[a,h]anthracene	- 01	10 U				
Benzo[g,h,i]perylene	10	10 U				
Total TIC concentration		154	830	395	37	1900
Units (mg/kg) Soil, (ug/L) Water	ng/L					
Dilution Factor		-		I	1	
Sample Weight/Volume	_	1000 mL				

1 MW2		I-MW2-GW3	9607375-04	water	96/6/L	7/22/96		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U		10 U	10 U	10 U	10.0	10 U	10 U	25 U	10 U	25 U	10 U	10 U	10 U	10 U	25 U	25 U	10 U	10 U	11 30
							CRQL	10	10	10	10	10	10	10	<b>9</b>	10	92	10	10	10	10	10	01	10	10	10	10	01	10	10	01	10	25	10	25	10	10	10	10	52	25	10	10	2 2
Site Location	Sample Depth	Sample Number	Laboratory Sample ID	Matrix	Date Sampled	Date Analyzed		bis(2-Chloroethyl)ether	Phenoi	2-Chlorophenol	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,2-Dichlorobenzene	2,2'- oxybis(1-chloropropane)	2-Methylphenol	Hexachloroethane	N-Nitroso-di-n-propylamine	4-Methylphenol	Nitrobenzene	Isophorone	2-Nitrophenol	2,4-Dimethylphenol	bis(2-Chloroethoxy)methane	2,4-Dichlorophenol	1,2,4-Trichlorobenzene	Naphthalene	4-Chloroaniline	Hexachlorobutadiene	4-Chloro-3-methylphenol	2-Methylnaphthalene	Hexachlorocyclopentadiene	2,4,6-Trichlorophenol	2,4,5-Trichlorophenol	2-Chloronaphthalene	2-Nitroaniline	Acenaphthylene	Dimethylphthalate	2,6-Dinitrotoluene	Acenaphthene	3-Nitroaniline	2,4-Dinitrophenol	Dibenzofuran	2 4-Dinitrotolnene	z, +- Zinut Oriotacia

-	MW2		1-MW2-GW3	960/3/5-04	7/9/96	96/6/1		10 U	10 U	1 J	25 U	25 U	10 U	10 U	10 U	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	100	10 OI	10 U	10 U	10 U	10 U	10 U	10 U	10 U	13	
Semivolatile Organic Compounds Site		Sample Depth	Sample Number		Date Sampled	Date Analyzed	CRQL	10	4-Chlorophenyl-phenylether	Diethylphthalate 10	4-Nitroaniline 25	4,6-Dinitro-2-methylphenol	n-Nitrosodiphenylamine 10	4-Bromophenyl-phenylether	Hexachlorobenzene 10	Pentachlorophenol 25	01	10		Di-n-butylphthalate 10	10			3,3'-Dichlorobenzidine 10	bis(2-Ethylhexyl)phthalate 10	Di-n-octylphthalate 10	Benzo[b]fluoranthene	Benzo[k]fluoranthene		Indeno[1,2,3-cd]pyrene	Đ.	Benzo[g,h,i]perylene		Units (mg/kg) Soil, (ug/L) Water ug/L

Inorganics	•					
Site		∞	∞	∞	<b>0</b> 0	<b>6</b> 0
Location		MW3	MW3	MW2A	MW2A	MW2
Sample Depth		9. MW3. GW2 (Thise)	8_N/W2_GW7	8-MW24-GW2 (Dies.)	8-MW7A-GW7	8-MW2-GW2 (Diss.)
Sample number		0-IVI W 3-C W Z (L)ES.)	7 H D-C H TAT-0	0-101 CO TO	2112 122 120	Circuit 2 11 2 11 11 2
Laboratory Sample ID		960/404-14	960/404-13	900/404-19	200/404-18	11-+0+1006
Matrix		water	water	water	water	water
Date Sampled		7/10/96	7/10/96	7/10/96	7/10/96	7/10/96
Date Analyzed		7/17-24/96	7/19-27/96	7/17-24/96	7/19-27/96	7/17-24/96
	CRDL					
Antimony	9*	5 U	U S	0.5	ΩS	υs
Arsenic	10	1.3	1.1 UJ	1.1 J	2 UJ	1 U
Barium	200	123 J	137 J	54.2 J	118 J	52.9 J
Beryllium	*	0.3 J	0.3 J	0.3 J	0.7 J	0.3 J
Cadmium	٠,	2 U	2 U	2 U	2 U	2 U
Chromium	10	Ω9	7.4 J	Ω9	Ω9	Ω9
Copper	25	4 U	4 U	4 U	4 U	4 U
Lead	6	1 U	1 U	n n	2.6 J	1 U
Mercury	0.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	40	U \$ .	S U	D \$	\$ 0	5 U
Selenium	v	1 U	13 T	10	1 5	1 U
Silver	10	3.0	3 U	3 U	3 U	3 U
Thallium	* 2	2 UJ	2 UI	2 UJ	2 UJ	2 UJ
Zinc	20	25.1	20.8 U	7.2 J	22.7	3.8 J
Units (mg/kg) Soil, (ug/L) Water	ng/L					
* Project-specific CRDL						

MWI-GW2 (Diss 9607404-) wat 7/10/2 7/17-24/3	8 MW1 8-MW1-GW2 9607404-11	7	7
### AW2 AW2 ####################################		-	
### 8-MW2-GW2 8-MW1-GW2 (D)  ### 8-MW2-GW2 8-MW1-GW2 (D)  ### 7/10/96 7/10/96 7/17-24  #### 7/10/96 7/17-24  #### 7/10/96 7/17-24  #### 7/10/96 7/17-24  #### 7/19-27/96 7/17-24  #### 7/19-27/96 7/17-24  #### 8-MW1-GW2 (D)  #### 7/10/96 7/17-24  #### 7/19-27/96 7/17-24  #### 8-MW1-GW2 (D)  #### 7/10/96 7/10/96  #### 7/10/96  #### 1/10/96  #### 1/10/96  #### 1/10/96  #### 1/10/96  ##### 1/10/96  ##### 1/10/96  ###################################			21117
Sample ID   SeAW2-GW2   S-MW1-GW2 (D)		CMINI	CWIM
Sample ID   9607404-16   9607404		7-MWS-GW2 (Dies.)	7 NAWE CAND
water w  water 7/10/96 7/117-24  // 10/96 7/117-24		9607375-02	0607375-01
yzed 7/10/96 7/17-24  Yzed CRDL *6	Water	To Common Market	ID-C/C/DOX
# CRDL	96/01/2	30/6/L	7/0/0£
CRDL *6 5 U 2 UJ 200 200 134 J 3 3 2 2 U 3 2 U 3 3 3 2 2 U 3 2 U 3 3 3 2 3 3 3 2 3 3 3 3	96/2-61/2	20/7/	06/6/1
*6	2011	06/47-11/1	06/17-61/1
200 134 J 3 *4 6 0.8 J 3 5 2 U 12.7 2.8 J 3.2 2.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	5 U S	11 5	11.5
200 134 J 3 *4 0.8 J 10 12.7 25 5.2 J 3 3.2 40 5.U	IO FI	1111	
*4 0.8 J 0.8	1 671	1 62 1	1.6 CE
\$ 2 U 10 12.7 25 5.2 J 3.2 0.2 U 40 5 U	131	11 20	777
10 12.7 25 5.2 J 3 3.2 0.2 0.2 U 0.4 40 5 U	11 6		L. I. I.
25 5.2 J 3 3.2 3.2 0.2 0.2 U 0.4 40 5.U	1 00	); ,	0.7
3 3.2 3.2 9.2 9.2 9.2 9.2 9.2 9.2 9.2 9.2 9.2 9	f 9./	0 9	10.6
3 3.2 0.2 40 6.2 U 0 5 U 5 U	6.5 J	4 U	8.7 J
0.2 0.2 U 0.40 40 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5 U 5	9.1	10	4
40 5 U 5 U 1 UJ 1 UJ 1 UJ 1 UJ 1 UJ 1 UJ 1	0.2 U	0.2.11	11 60
m 5 1UJ	10.9 J	11 \$	0.1.7
C.		) : :	
		<b>3</b>	<u> </u>
3.0	3 U	3 U	3 U
	2 U	2 UJ	2 U
Zinc 20 27.6 4.1 J	49.8	5.3	40.7
Units (mg/kg) Soil, (ug/L) Water ug/L			

Inorganics	_	ŧ	t	•	`	•
Site		_	•	¢	0	0
Location		MW2	MW2	MW3A	MW3A	MW3
Sample Depth						
Sample Number		7-MW2-GW2 (Diss.)	7-MW2-GW2	6-MW3A-GW2 (Diss.)	6-MW3A-GW2	6-MW3-GW2 (Dissolved)
Laboratory Sample ID		9607375-07	9607375-06	9607404-04	9607404-03	9607404-02
Matrix		water	water	water	water	water
Date Sampled		96/6/L	96/6/L	7/10/96	2/10/96	7/10/96
Date Analyzed		7/17-24/96	7/19-27/96	7/17-24/96	7/19-27/96	7/17-24/96
	CRDL					
Antimony	9*	5 U	S U	ns	n s	n s
Arsenic	01	1 UJ	u u	10	2.2 UJ	<b>1</b> U
Barium	200	108 J	118 J	252	396	260
Beryllium	*	0.3 J	0.3 J	0.3 U	0.6 J	0.3 J
Cadmium	8	2 U	2 U	2 U	2 U	2 U
Chromium	10	0.9	7 3	Ω9	8.3 J	n 9
Copper	25	4 U	4 U	4 U	13.9 J	4 U
Lead	ю	10	1.2 J	1.0	3.5	1 U
Mercury	0.2	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	40	S U	S U	5.7 J	18.1 J	S U
Selenium	s	10	1 U	1 0	1 UJ	1 U
Silver	10	3.0	3 U	3 U	3 U	3 U
Thallium	* 2	2 U	2 UJ	2 U	2 U	2 UJ
Zinc	20	9.1 J	18.8 U	6.8 J	33.3	5.6 J
Units (mg/kg) Soil, (ng/L) Water • Project-specific CRDL	T/8n					

MW3 6-MW3-GW2		9	<b>'</b>	v
W3-GW2	MW2	MW2	MW1	MW1
	6-MW2-GW2 (Diss.)	6-MW2-GW2	6-MW1-GW3 (Diss.)	6-MW1-GW3
07404-01	9607404-09	9607404-08	9607404-07	9607404-06
water	water	water	water	wafer
7/10/96	7/10/96	7/10/96	7/10/96	96/01/2
19-27/96	7/17-24/96	7/19-27/96	7/17-24/96	7/19-27/96
11.5	11.5	11.3		
) <b>.</b>		0.00	0.5	o S
3	G I	3.6 UJ	1.2 J	1.3 UJ
328	99.9 J	154 J	152 J	194 J
0.5 J	0.3 J	0.7 J	0.3 J	0.5 J
2 U	2 U	2 U	2 U	2.11
8.9 J	n 9	11.1	n 9	11 9
11.1 J	4 U	5.4 J	D 4	11 4
3.6	1 U	4.3	10	22.3
0.2 U	0.2 U	0.2 U	0.2 U	0.2 11
10.3 J	n s	15.7 J	S U	11.5
1 UI	1 U	1 UJ	חו	
3 U	3.0	3 U	O E	31.6
2 U	2 UI	2 UJ	2 U	2 U
26.9	f 8	42.7	6.5 J	15.3 13
	5 U 1 UJ 328 0.5 J 2 U 8.9 J 11.1 J 3.6 0.2 U 10.3 J 1 UJ 3 U 2 U 2 C 2 C		5 U 1 UJ 99.9 J 0.3 J 2 U 6 U 4 U 1 U 0.2 U 5 U 1 U 3 U 8 J	5 U 1 UJ 99.9 J 0.3 J 2 U 6 U 4 U 1 U 0.2 U 5 U 1 U 3 U 8 J

Inorganics Site		1	-	
Location		MW2	MW2	
Sample Depth	_			
Sample Number		1-MW2-GW3 (Diss.)	1-MW2-GW3	
Laboratory Sample ID		9607375-05	9607375-04	
Matrix		water	water	
Date Sampled		96/6/L	96/6/L	
Date Analyzed		7/17-24/96	7/19-27/96	
	CRDL			
Antimony	9*	SU	2 U	
Arsenic	10	1 U	1 U	
Barium	200	86.9 J	139 J	
Beryllium	4	0.3 J	0.5 J	
Cadmium	٠,	2 U	2 U	
Chromium	10	Ω9	13.2	
Copper	25	4 U	4 U	
Lead	8	10	1.9 J	
Mercury	0.2	0.2 U	0.2 U	
Nickel	4	n s	6 J	
Selenium	\$	4.4 J	3.3 UJ	
Silver	10	3 U	3 U	
Thallium	*2	2 UJ	2 UJ	
Zinc	20	33.6	83.4 J	
Units (mg/kg) Soil, (ug/L) Water * Project-specific CRDL	ng/L			

JP4, Gas, Diesel, Oil						
Site		<b>\$</b>	80	•	∞	7
Location		MW3	MW2A	MW2	MW1	MW5
Sample Depth						
Sample Number		8-MW3-GW2	8-MW2A-GW2	8-MW2-GW2	8-MW1-GW2	7-MW5-GW2
Laboratory Sample ID		9607404-13	9607404-18	9607404-16	9607404-11	9607375-01
Matrix		water	water	water	water	water
Date Sampled		7/10/96	96/01/L	7/10/96	7/10/96	96/6/L
Date Analyzed		7/17-24/96	7/18-24/96	7/17-24/96	7/17-24/96	7/17-25/96
	* RL					
Gasoline range	0.25	0.25 U				
Diesel range, as diesel	0.25	0.26 NJ	0.25 U	0.25 U	0.25 U	0.25 NJ
Oil range, as oil		1 U	10	1 n	1 U	1 n
JP-4	0.25	0.25 UJ	0.25 U	0.25 U	0.25 U	0.25 U
Units (mg/kg) Soil, (mg/L) Water	mg/L					
* RL - Reporting Limit						

Sample Number         7-MW2-GW2           Laboratory Sample ID         9607375-06           Matrix         water           Date Sampled         7/9/96           Date Analyzed         * Dr	6-MW3A-GW2 9607404-03 water 7/10/96	6-MW3-GW2 9607404-01 water 7/1096	6-MW2-GW2	6-MW1-GW3
2	7/17-24/96	7/17-24/96	9607404-08 water 7/10/96 7/17-24/96	water 7/10/96 7/17-24/96
Gasoline range 0.25 0.68	0.25 U	0.25 U	0.25 U	0.97
Diesel range, as diesel 0.25 U	3.7 NJ	1.2 NJ	0.25 11	3.1
Oil range, as oil 1 U	1 U	110	11 1	E. 6.1.
0.25 U 0.25 U	3.3 NI	IN I		I

JP4, Gas, Diesel, Oil	•	
Site		-
Location		MW2
Sample Depth		
Sample Number		1-MW2-GW3
Laboratory Sample ID		9607375-04
Matrix		Water
Date Sampled		1/9/96
Date Analyzed		7/17-24/96
	* RL	
Gasoline range	0.25	0.25 U
Diesel range, as diesel	0.25	0.25 U
Oil range, as oil		10
JP-4	0.25	0.25 U
Units (mg/kg) Soil, (mg/L) Water	mg/L	
* RL - Reporting Limit	_	

Location Sample Depth Sample Number Laboratory Sample ID Matrix Date Sampled  Date Analyzed  CRQL Chloromethane		SS3	633		
			332	SSI	
		<u>-</u>	0-1	0-1	
	TB-K	MANG-SS3-0'-1'	MANG-SS2-0'-1'	MANG-SS1-0-1'	
	9607475-08	9607475-03	9607475-02	9607475-01	
	water	soil	soil	soil	
	7/12/96	7/11/96	7/11/96	7/11/96	
	1/19/96	7/19/96	2/16/96	7/19/96	
	10 U	11 UJ	11 UJ	II UI	
Vinyl Chloride 10	10 U	11 UI	11 UI	11 03	
Bromomethane 10	10 U	11 UI	11 UJ	11 GI	
Chloroethane 10	10 U	11 UJ	11 UJ	11 U	
thene	10 U	11 UJ	11 U	11 U	
	10	11 U	11 UJ	11 UJ	
Carbon Disulfide	10 U	1 J	11 UI	11 UI	
e.	10 U	3 1	J.E.	εο •••	
	11 01	III II	HIH	11111	
	11 01	E :-		1111	
2 2	î 01	11 11		3 E E	
Cincipionin	11 91 11 91	3 = =	3 =	S ::	
	0 91 0 91	3 E	3 E		
Carbon retrachionde	001		S ::	S E	
	0 01 :	3:		3 :	
пе	0.01	3 : = :	3 :		
	10 01	3 :: ::	3 : :	n II	
	10 U	E 11	5 =		
	10 U	11 03	B 11	n n	
2	10 U	11 GI	11 GI	n n	
4-Methyl-2-Pentanone	10 U	11 UJ	5 J	11 U	
10	10 U	II UI	11 UI	11 UJ	
trans-1,3-Dichloropropene 10	10 U	E ::	11 CE	11 UJ	
1,1,2-Trichloroethane	10 U	n a	B = 1	11 03	
Tetrachloroethene 10	10 U	11 UI	11 50	11 G	
10	10 U	18	6.3	2 J	
Dibromochloromethane 10	10 U	11 UI	II UI	n n	
Chlorobenzene 10	10 U	11 UJ	11 03	11 UJ	
Ethylbenzene 10	10 U	11 UI	11 UJ	11 GI	
	10 U	11 UI	11 U	11 UJ	
10	10 U	11 UJ	11 UJ	11 UI	
1.1.2.2-Tetrachloroethane 10	10 U	11 03	13 E	11 03	
	10 01	5 =	in ii	11 0	
	10 O	D =	B ::	11 UI	
entration	, c	C	C	0	
Thits (110/kg) Soil (110/L) Water					
Dilution Factor		-	-		
Somula Waight/Volume	50 m	508	905	, 808	
	100	90 F	20.5. 20.5.	on v	

853 852 854 855 854 854 854 9607 854 1000 U 11000 U 11	Site				MANG	
## ANYO-853-0-1    MANG-853-0-1   MANG-853-0-1   Soft 14-5-03   So		_	MANG	ואואואו	);;;	
MANG-SS3-0-1  MANG-SS3-0-1  Seq 7/11/96  7/11/96	Location		SS3	SS2	SS1	
MANG-SS3-0-1	Sample Depth		0-1	0-1	0-1	
CROQL  CROQL  110000	Sample Number		MANG-SS3-0'-1'	MANG-SS2-0'-1'	MANG-SS1-0'-1'	
Soil	Laboratory Sample ID		9607475-03	9607475-02	9607475-01	
Thirlog	Matrix		soil	soil	soil	
10000   11000 U   11000	Date Sampled		7/11/96	7/11/96	7/11/96	
CRQL 110000 110000 U 11000 U 1	Date Analyzed		7/24/96	7/24/96	7/24/96	
10000   11000 U   11000	The second secon	CRQL		, 1 , 1 , 1		
10000   110000 U   1	bis(2-Chloroethyl)ether	10000	11000 U	11000 U	11000 U	
10000 U   110000 U	Phenol	10000	11000 U	11000 U	11000 U	
zene         10000         11000 U         11000 U           zene         10000         11000 U         11000 U           zene         10000         11000 U         11000 U           Incorpropaire)         10000         11000 U         11000 U           Incorpropaire)         10000         11000 U         11000 U           Incorpropaire         10000         11000 U         11000 U           Incorpropaire         11000 U         1100	2-Chlorophenol	10000	11000 U	11000 U	11000 U	
zene         10000 U         11000 U         11000 U           zene         10000 U         11000 U         11000 U           forogropane)         10000         11000 U         11000 U           nopylamine         10000         11000 U         11000 U           10000         11000 U         11000 U         11000 U           mol         10000         11000 U         11000 U           enzence         10000         11000 U         11000 U           stene         10000         11000 U         11000 U           phenol         20000         22000 U         23000 U         23000 U           phenol         20000         22000 U         23000 U         23000 U           phenol         10000         11000 U         11000 U         11000	1,3-Dichlorobenzene	10000	11000 U	11000 U	11000 U	
10000 U   11000 U   1100	1,4-Dichlorobenzene	10000	11000 U	11000 U	11000 U	
10000 U   11000 U   1100	1,2-Dichlorobenzene	10000	11000 U	11000 U	11000 U	
replannine 10000 11000 U 11000	2,2'-oxybis(1-chloropropane)	10000	11000 U	11000 U	11000 U	
20000         22000 U         23000 U           10000         11000 U         11000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         11000 U         11000 U           10000         11000 U         11000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           10000         11000 U         11000 U           1000         22000 U         23000 U	2-Methylphenol	10000	11000 U	11000 U	11000 U	
10000         11000 U         11000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         11000 U         11000 U           10000         11000 U         11000 U           10000         11000 U         11000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           11000         11000 U         11000 U           11000         22000 U         23000 U           11000         22000 U         23000 U <td< td=""><th>Hexachloroethane</th><th>20000</th><td>22000 U</td><td>23000 U</td><td>21000 U</td><td></td></td<>	Hexachloroethane	20000	22000 U	23000 U	21000 U	
10000 11000 U 110000 U 110000 U 110000 U 11000 U 110000 U 11000 U 110000 U 11	N-Nitroso-di-n-propylamine	10000	11000 U	11000 U	11000 U	
10000 11000 U	Methylphenol	10000	11000 U	11000 U	11000 U	
10000 11000 U 110000 U 11000 U 11000 U 11000 U 11000 U 110000 U 1100	Vitrobenzene	10000	11000 U	11000 U	11000 U	
10000 11000 U	sophorone	10000	11000 U	11000 U	11000 U	
10000 11000 U 110000	Nitrophenol	10000	11000 U	11000 U	11000 U	
10000         11000 U         11000 U           20000         22000 U         23000 U           10000         11000 U         11000 U           10000         11000 U         11000 U           10000         11000 U         11000 U           20000         22000 U         11000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         11000 U         11000 U           10000         11000 U         11000 U           20000         22000 U         23000 U           20000         11000 U         11000 U           10000         11000 U         11000 U           10000         22000 U         23000 U           20000         54000 U         11000 U           1000         11000 U         11000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           1000         22000 U         23000 U           10000         22000 U         23000 U	,4-Dimethylphenol	10000	11000 U	11000 U	11000 U	
20000         22000 U         23000 U           10000         11000 U         11000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         11000 U         11000 U           10000         11000 U         11000 U           10000         11000 U         11000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           10000         11000 U         11000 U           10000         24000 U         23000 U           20000         22000 U         23000 U	is(2-Chloroethoxy)methane	10000	11000 U	11000 U	11000 U	
10000         11000 U         11000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         11000 U         11000 U           10000         11000 U         11000 U           10000         11000 U         11000 U           20000         22000 U         23000 U           20000         11000 U         11000 U           10000         11000 U         11000 U           20000         22000 U         23000 U	,4-Dichlorophenol	20000	22000 U	23000 U	21000 U	
10000         11000 U         11000 U           10000         11000 U         11000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         11000 U         11000 U           10000         11000 U         11000 U           10000         11000 U         11000 U           10000         11000 U         11000 U           20000         22000 U         23000 U           1000         11000 U         11000 U           1000         24000 U         23000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           10000 U         22000 U         23000 U	,2,4-Trichlorobenzene	10000	11000 U	11000 U	11000 U	
10000     11000 U     11000 U       20000     22000 U     23000 U       20000     11000 U     11000 U       20000     22000 U     23000 U       20000     22000 U     23000 U       20000     22000 U     23000 U       20000     11000 U     11000 U       20000     11000 U     11000 U       10000     11000 U     11000 U       20000     11000 U     11000 U       10000     11000 U     11000 U       10000     11000 U     11000 U       10000     22000 U     23000 U       20000     22000 U     23000 U       20000     22000 U     23000 U       110000 U     110000 U     110000 U	Japhthalene	10000	11000 U	11000 U	11000 U	
10000         11000 U         11000 U           20000         22000 U         23000 U           10000         11000 U         11000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           10000         11000 U         11000 U           10000         11000 U         11000 U           20000         11000 U         11000 U           10000         11000 U         11000 U           10000         11000 U         11000 U           10000         22000 U         23000 U           20000         22000 U         23000 U           10000         22000 U         23000 U           10000 U         22000 U         23000 U           10000 U         22000 U         23000 U	-Chloroaniline	10000	11000 U	11000 U	11000 U	
20000         22000 U         23000 U           10000         11000 U         11000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           10000         11000 U         11000 U           10000         11000 U         11000 U           20000         11000 U         11000 U           20000         22000 U         23000 U           10000         11000 U         11000 U           1000         22000 U         23000 U           20000         22000 U         23000 U           10000         22000 U         23000 U           110000 U         110000 U	<b>Jexachlorobutadiene</b>	10000	11000 U	11000 U	11000 U	
10000         11000 U         11000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         11000 U         11000 U           10000         11000 U         11000 U           10000         11000 U         11000 U           20000         22000 U         23000 U           10000         11000 U         11000 U           1000         11000 U         11000 U           1000         22000 U         23000 U           20000         22000 U         23000 U           11000 U         11000 U         11000 U	-Chloro-3-methylphenol	20000	22000 U	23000 U	21000 U	
20000         22000 U         23000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           20000         11000 U         11000 U           10000         11000 U         11000 U           10000         11000 U         11000 U           20000         22000 U         23000 U           50000         54000 U         11000 U           1000         11000 U         11000 U           20000         22000 U         23000 U           20000         22000 U         23000 U           11000 U         23000 U           11000 U         23000 U	-Methylnaphthalene	10000	11000 U	11000 U	11000 U	
20000         22000 U         23000 U           20000         22000 U         23000 U           10000         11000 U         11000 U           20000         11000 U         11000 U           10000         11000 U         11000 U           10000         11000 U         11000 U           1000         11000 U         11000 U           1000         11000 U         11000 U           20000         11000 U         11000 U           20000         22000 U         23000 U           11000         22000 U         23000 U           11000         11000 U         11000 U	<b>Texachlorocyclopentadiene</b>	20000	22000 U	23000 U	21000 U	
20000         22000 U         23000 U           10000         11000 U         11000 U           20000         22000 U         23000 U           10000         11000 U         11000 U           10000         11000 U         11000 U           20000         22000 U         23000 U           11000         11000 U         11000 U           1000         11000 U         11000 U           20000         22000 U         23000 U           11000         22000 U         23000 U           11000         11000 U         11000 U	,4,6-Trichlorophenol	20000	22000 U	23000 U	21000 U	
rne 10000 11000 U 11000 U 11000 U 22000 U 22000 U 23000 U 23000 U 10000 U 11000 U 1100	,4,5-Trichlorophenol	20000	22000 U	23000 U	21000 U	
20000 22000 U 23000 U 11000 U 110000 U	2-Chloronaphthalene	10000	11000 U	11000 U	11000 U	
10000 11000 U 1100 U 11000 U 110000 U 11000 U 11000 U 11000 U 110000	2-Nitroaniline	20000	22000 U	23000 U	21000 U	
10000 11000 U 11000 U 22000 U 23000 U 23000 U 11000 U 1100 U 1100 U 1100 U 11000 U 1100 U 1100 U 11000 U 110000	Acenaphthylene	10000	11000 U	11000 U	11000 U	
20000 22000 U 23000 U 23000 U 10000 U 11000 U 11000 U 50000 U 11000 U 57000 U 57000 U 110000 U 110000 U 11000 U 11000 U 1100 U 1100 U 1100 U 11000 U 1100 U 1100 U 110000 U 11	Dimethylphthalate	10000	11000 U	11000 U	11000 U	
10000 11000 U 11000 U 50000 U 50000 U 50000 U 110000 U 110000 U 110000 U 110000 U 1100 U 1100 U 1100 U 1100 U 1100 U 1100 U 110000 U 1100 U 110000 U	2,6-Dinitrotoluene	20000	22000 U	23000 U	21000 U	
\$0000 \$4000 U \$7000 U 110000 U 110000 U 110000 U 11000 U 1100 U 1100 U 1100 U 20000 U 22000 U 23000 U 110000 U 110000 U 110000 U 110000 U 110000 U 110000 U	Acenaphthene	10000	11000 U	11000 U	11000 U	
110000 U 110000 U 110000 U 1 1000 1100 U 1100 U 1100 U 20000 U 23000 U 110000 U 1100	3-Nitroaniline	20000	54000 U	57000 U	53000 U	
1000 1100 U 1100 U 20000 U 23000 U 110000 U 110000 U 110000 U 110000 U 110000 U	2,4-Dinitrophenol	110000	110000 U	110000 U	110000 U	
20000 23000 U 23000 U 110000 U 110000 U 1	Dibenzofuran	1000	1100 U	1100 U	1100 U	
110000 11 110000 11	2.4-Dinitrotoluene	20000	22000 U	23000 U	21000 U	
	L-Nitrophenol	110000	110000 U	110000 U	110000 U	

DIIC		MANG	MANG	MANG	
Location		SS3	SS2	158	
Sample Depth		0-1	<u>-</u>	)-1  -1	
Sample Number		MANG-SS3-0'-1'	MANG-SS2-0'-1'	MANG-SS1-0-1'	
Laboratory Sample ID		9607475-03	9607475-02	9607475-01	
Matrix		lios	soil	lios	
Date Sampled		7/11/96	7/11/96	96/11/2	
Date Analyzed	_	7/24/96	7/24/96	7/24/96	
	CRQL				
Fluorene	10000	11000 U	U 00011	11000 U	
4-Chlorophenyl-phenylether	10000	11000 U	11000 U	11000 U	
Diethylphthalate	10000	11000 U	11000 U	11000 U	
4-Nitroaniline	20000	22000 U	23000 U	21000 U	
4,6-Dinitro-2-methylphenol	110000	110000 U	110000 U	110000 U	
n-Nitrosodiphenylamine	10000	11000 U	11000 U	11000 U	
4-Bromophenyl-phenylether	20000	22000 U	23000 U	21000 U	
Hexachlorobenzene	20000	22000 U	23000 U	21000 U	
Pentachlorophenol	110000	110000 U	110000 U	110000 U	
Phenanthrene	10000	11000 U	11000 U	11000 U	
Anthracene	10000	11000 U	11000 U	11000 U	
Carbazole	10000	11000 U	11000 U	11000 U	
Di-n-butylphthalate	10000	11000 U	11000 U	130 J	
Fluoranthene	10000	11000 U	220 J	f 061	
Pyrene	10000	130 J	280 J	490 J	
Butylbenzylphthalate	10000	11000 U	11000 U	11000 U	
3,3'-Dichlorobenzidine	110000	110000 U	110000 U	110000 U	
Benzo[a]anthracene	10000	11000 U	11000 U	11000 U	
Chrysene	10000	240 J	11000 U	490 J	
bis(2-Ethylhexyl)phthalate	10000	11000 U	11000 U	11000 U	
Di-n-octylphthalate	10000	11000 UJ	11000 UJ	11000 UJ	
Benzo[b]fluoranthene	10000	170 J	f 099	540 J	
Benzo[k]fluoranthene	10000	170 J	f 099	540 J	
Benzo[a]pyrene	10000	11000 U	380 J	1100011	
Indeno[1,2,3-cd]pyrene	10000	11000 U	11000 U	110 J	
Dibenz[a,h]anthracene	10000	11000 U	11000 U	11000 11	
Benzo[g,h,i]perylene	10000	11000 U	620 J	340 J	
Total TIC concentration		0	4600	6100	
Units (ug/kg) Soil, (ug/L) Water	ng/kg				
Dilution Factor			1	-	
Sample Weight/Volume		1.00	100		
		0	2	#:O.E	

SS3 SS3 SS3 0-1 0-1 0-1 0-1 0-1 MANG-SS3-0-1' 9607475-03 soil 7/11/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 7/23/97 - 8/1/96 7/23/97 - 8/1/96 7/23/97 - 8/1/96 7/23/97 - 8/1/96 7/23/97 - 8/1/96 7/23/97 - 8/1/96 7/23/97 - 8/1/96 7/23/97 - 8/1/97 7/23/97 - 8/1/97 7/23/96 - 8/1/96 7/23/97 - 8/1/96 7/23
MANG SS2 0-1 0-1 MANG-SS2-0-1' 9607475-02 soil 7/11/96 7/23/96 - 8/1/96 7/23/96 - 8/1/96 1.1 J 7.6 J 458 J 0.66 J 11.9 80.5 J 63.4 758 0.1 U 24.5 0.38 UJ 1.6 J 1.6 J 80.5 J 63.4 758 0.1 U 24.5 0.38 UJ 1.6 J 1.6 J 1.7 S 1.8 S 1.9 S 1.1 S 1.1 S 1.1 S 1.1 S 1.1 S 1.1 S 1.2 S 1.3 S 1.4 S 1.5 S 1.6 S 1.6 S 1.7 S 1.7 S 1.8 S 1.8 S 1.8 S 1.8 S 1.8 S 1.9 S 1.9 S 1.9 S 1.9 S 1.1 S 1.1 S 1.1 S 1.1 S 1.1 S 1.1 S 1.1 S 1.1 S 1.1 S 1.2 S 1.1

Low Level Volatile Organic Compounds	•				
Site					
Location					
Sample Depth					
Sample Number	TB-1	TB-I	TB-H	TB-G	PADW-1
Laboratory Sample ID	9607477-05	9607483-03	9607488-05	9607481-03	9607483-02
Matrix	water	water	water	water	water
Date Sampled	7/11/96	7/11/96	7/11/96	7/11/96	7/11/96
Date Analyzed	7/18/96	7/18/96	7/18/96	7/18/96	7/23/96
Chloromethane	10	1 U	1 U	1 U	1 U
Vinyl chloride 1	nı	1 U	1 U	n 1	1 U
Bromomethane	1 U	1 U	1 0	10	1 U
Chloroethane	n I	1 U	1 U	10	1 U
1.1-Dichloroethene	. 1U	1 U	1 0	1 U	1 0
Acetone 5	D & D	5.5	5 U	6.7	20
Carbon disulfide	10	10	1 U	1 U	1 U
Methylene chloride 2	1.1 J	0.44 J	0.37 J	0.57 J	2 U
trans-1.2-Dichloroethene	1 U	1 U	10	1 U	10
1.1-Dichloroethane	1 U	1 U	1 U	10	1 0
cis-1.2-Dichloroethene	10	1 U	10	1 U	2.2
2-Butanone 5	s U	0.23 J	5 U	S U	2 U
Bromochloromethane 1	10	1 U	10	1 U	10
Chloroform	1 U	1 U	1.0	1 U	1 U
1.2-Dichloroethane	10	1 U	10	1 U	1 U
1.1.1-Trichloroethane	10	1 U	10	1 U	1 U
Carbon tetrachloride	10	1 U	1 U	1 U	1 U
Benzene	1 U	. 1 Ω	1 U	1 U	0.36 J
Trichloroethene	10	1.0	1 U	1 U	0.15 J
1,2-Dichloropropane	10	1 U	1 U	10	1 U
Bromodichloromethane 1	1 U	1 U	10	1 U	1 U
cis-1,3-Dichloropropene	10	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone	5 U	S U	5 U	5 U	5 U
Toluene	0.13 J	10	1 U	1 U	1 0
trans-1,3-Dichloropropene	10	10	1 U	10	1 U
1,1,2-Trichloroethane	10	n I	1 U	D I	01
Tetrachloroethene 1	n <b>1</b>	ם נ	1.0	10	01
2-Hexanone 5	) s u	2 U	0 <b>S</b>	5 U	D <b>s</b>
Dibromochloromethane 1	1 U	1 U	1 U	D 1	01
1,2-Dibromoethane	10	1 U	<b>1</b>	U I	01
Chlorobenzene	n 1	1 U	10	0.1	0.1
Ethylbenzene	1 U	1 U	D I	<b>D</b> :	0.11 J
Styrene	1 U	1 U	D 1	10	0.1
1, 1, 2, 2-Tetrachloroethane	1 C	10	10	Þ.:	10
Bromoform 1	1 U	n i	D I	D.	o :
1,3-Dichlorobenzene	1 U	D.I.	O I	01	) I
1,4-Dichlorobenzene	10	10	10	0 <b>T</b>	o I

Site Location Sample Depth Sample Depth Matrix Date Sampled Date Analyzed CROL	1,2-Dichlorobenzene 1 1,2-Dibromo-3-chloropropane 1 Xylene (total) 1 Total TIC concentration 1 Units (100/kg) Soil (110/1) Water 1	
TB-J 9607477-05 water 7/11/96	1 U 1 U 1 U	1 25.0 mL
TB-I 9607483-03 water 7/11/96	1 U 1 U 0	1 25.0 ml
TB-H 9607488-05 water 7/11/96	11 U U U O	1
TB-G 9607481-03 water 7/11/96	1 U 1 U 1 U 0	1
PADW-1 9607483-02 water 7/11/96	1 U 1 U 0.19 J 0	1

Low Level Volatile Organic Compounds					
Site					<b>∞</b>
Location					MW4
Sample Depth					
Sample Number	FB-PW-GW2	FB-DI-GW2	DCPW-1DL	DCPW-1	8-MW4-GW2DL
Laboratory Sample ID	9607481-02	9607481-01	9607483-01DL	9607483-01	9607477-01DL
Matrix	water	water	water	water	water
Date Sampled	7/11/96	7/11/96	7/11/96	7/11/96	7/11/96
Date Analyzed	7/18/96	7/18/96	7/23/96	7/23/96	7/23/96
CKUL	[]	ΩΙ	100 U	20 U	20 UJ
Vinvl chloride	0.1	1 U	100 U	20 U	20 UJ
Bromomethane	10	UI	100 U	20 U	20 UJ
Chloroethane	10	n <b>1</b>	D 001	20 U	20 UJ
1,1-Dichloroethene	1 U	1 U	100 U	20 U	20 UJ
Acetone 5	3.7 J	5 U	8300 D	6600 E	ଅ
Carbon disulfide	0.44 J	1 0	100 U	20 U	20 UJ
Methylene chloride 2	0.59 J	2 U	45 JBD	4.8 BJ	40 UJ
trans-1,2-Dichloroethene	10	1 U	100 U	20 U	20 UJ
1,1-Dichloroethane	1 0	1 U	100 U	20 U	4.2 J
cis-1,2-Dichloroethene	10	1 U	100 U	20 U	220 J
2-Butanone 5	s u	D S	200 U	100 U	æ
Bromochloromethane 1	10	10	100 U	20 U	20 UJ
Chloroform	4.9	1 U	100 U	20 U	20 UJ
1,2-Dichloroethane	10	1 U	100 U	20 U	20 UJ
1,1,1-Trichloroethane	1 1	1 n	100 U	20 U	20 UJ
Carbon tetrachloride	10	n 1	100 U	20 U	20 UJ
Benzene	10	1 0	100 U	20 U	20 UJ
Trichloroethene	n I	10	1001	20 U	7.4 J
1,2-Dichloropropane	1 0	01	D 001	20 U	20 CJ
Bromodichloromethane 1	0.66 J	) : 	0.001	O 07	10 07 11 00
cis-1,3-Dichloropropene			0.001	0.02	to 02
4-Methyl-2-pentanone	);·	); ;	0 000	0 001	50 001
Toluene			0.001	20.02	10 02 11 06
trans-1,3-Lychloropropene	)		2001	2 2 2	11 0c
1, 1, 2-1 rehoroethane			1 90	0.07	111 02
Tenachorocurence			11 00\$	11 901	i <u>a</u>
Z-rexanone	) <del>-</del>	) - -	11 001	2011	20 UI
י בייייייייייייייייייייייייייייייייייי		11.	11 001	20 11	20 111
1,2-Diormoeinane		0.1	1001	20 17	20 UJ
Cilionositzens			11 001	11 00	111 00
Ethylbenzene			81 99	20 02 02	20 27
Styrene	o ;	o ;	0.001	0 20	
1,1,2,2-Tetrachloroethane	0.1	10	0.001	20 07	20 02 31 03
Bromoform	); 	101:	0.001	0.02	20 CJ
1,3-Dichlorobenzene	01	o ;	O 001	0 07 :: 02	20 02 11 02
1,4-Dichlorobenzene	O I	10	100 0	70 07	<b>1</b> 0 07

•	-					
Site				•		۰
Location						•
Sample Depth						MW4
Sample Number		FB-PW-GW2	FB-DI-GW2	DCPW-1DL	DCPW-1	8-MW4-GW2DI
Laboratory Sample ID		9607481-02	9607481-01	9607483-01DL	9607483-01	9607477-01DL
Matrix		water	water	water	water	water
Date Sampled		7/11/96	7/11/96	7/11/96	7/11/96	1/11/96
Date Analyzed		7/18/96	7/18/96	7/23/96	7/23/96	96/2//
	CRQL					
1,2-Dichlorobenzene	1	1 U	1 U	100 U	20 U	20 111
1,2-Dibromo-3-chloropropane	-	1 U	1 U	100 U	20 11	30 111
Xylene (total)	1	1 U	1 U	100 U	20 11	III 02
Total TIC concentration		0	0	1900	0081	
Units (ug/kg) Soil, (ug/L) Water	ng/L					
Dilution Factor	ı	F	-	001	0,0	υc
Sample Weight/Volume		25.0 mJ.	25.0 ml	};- 0 <b>3</b> €	1 · · · · · · · · · · · · · · · · · · ·	07

Low Level Volatile Organic Compounds					
Site	•	∞	7	7	-
Location	MW4	MW4	MW4	MW3	MWI
Sample Depth Sample Number	8-MW4-GW2	8-MW4-GW2	7-MW4-GW2	7-MW3-GW3	1-MW1-GW2
Laboratory Sample ID	9607477-01	9607477-01	9607488-03	9607477-03	9607488-01
Matrix	water	water	water	water	water
Date Sampled	7/11/96	7/11/96	1/11/96	7/11/96	7/11/96
_	1/23/96	Composite result	1/26/96	7/18/96	7/23/96
C	CRQL				
Chloromethane	1 0.17 J	0.17 J	R	0.19 J	<b>x</b>
Vinyl chloride	1 1 10	1 U	<b>x</b>	1 UI	<b>x</b>
Bromomethane	1 1 10	1 01	<b>x</b>	1 UJ	~
Chloroethane	1 1 UI	1 UJ	<b>x</b>	1 UJ	<b>x</b>
1,1-Dichloroethene	1 0.59 J	0.59 J	<b>x</b>	1 UJ	<b>x</b>
Acetone	S R	<b>x</b>	<b>x</b>	<b>&amp;</b>	<b>x</b>
Carbon disulfide	1 UJ	1 UJ	<b>x</b>	1 UI	×
Methylene chloride	2 2 UJ	2 UJ	æ	2 UJ	ĸ
trans-1,2-Dichloroethene	1 0.1 J	0.1 J	æ	1 UI	ĸ
1,1-Dichloroethane	1 5.3 J	5.3 J	<b>x</b>	0.13 J	<b>x</b>
cis-1,2-Dichloroethene	1 230 J	220 J	8	0.31 J	æ
2-Butanone	5 R	24	<b>x</b>	æ	<b>x</b>
Bromochloromethane	1 1 UI	1 U	<b>x</b>	101	æ
Chloroform	1 1.6 J	1.6 J	<b>x</b>	2.9 J	ĸ
1,2-Dichloroethane	1 1 UI	1 UJ	2	1 5	м
1.1.1-Trichloroethane	1 1.2 J	1.2 J	<b>x</b>	0.2 J	æ
Carbon tetrachloride	1 0.18 J	0.18 J	<b>x</b>	1 13	ય
Benzene	1 UJ	1 UI	0.44 J	1 03	0.19 J
Trichloroethene	1 8.5 J	8.5 J	<b>x</b>	0.67 J	<b>x</b>
1,2-Dichloropropane	1 UU	1 UJ	<b>x</b>	1 12	<b>x</b>
Bromodichloromethane	1 0.15 J	0.15 J	a a	1 UI	<b>x</b>
cis-1,3-Dichloropropene	1 1 UI	1 01	<b>~</b>	1 UJ	<b>~</b>
4-Methyl-2-pentanone	s sur	s ur	<b>~</b>	s ur	<b>x</b>
Toluene	1 2.3 J	2.3 J	1.5 J	1.9 J	<b>x</b>
trans-1,3-Dichloropropene	1 1 U	1 UI	ጸ	1 UI	<b>~</b>
1,1,2-Trichloroethane	1 1 UI	ı u	<b>~</b>	1 UI	<b>x</b>
Tetrachloroethene	1 2 J	2 J	ଅ	0.45 J	ĸ
2-Hexanone	5 R	<b>x</b>	æ	<b>x</b>	<b>x</b>
Dibromochloromethane	1 1 03	1 UI	<b>x</b>	1 UJ	R
1,2-Dibromoethane	1 1 UJ	1 03	×	1 UI	<b>x</b>
Chlorobenzene	1 1 UI	1 UI	<b>x</b>	1 UI	æ
Ethylbenzene	1 1 10	1 0	0.69 J	1 13	<b>x</b>
Styrene	1 U	1 UI	<b>x</b>	1 CI	æ
1,1,2,2-Tetrachloroethane	1 UJ	1 UI	2	1 UJ	<b>x</b>
Bromoform	1 U	1 UI	<b>x</b>	0.19 J	M M
1,3-Dichlorobenzene	1 1 01	1 UJ	<b>x</b>	ı u	ĸ
1,4-Dichlorobenzene	1   1.2 J	1.2 J	0.88 J	0.94 J	<b>~</b>

.,,,	-					
Site		•	<b>∞</b>	7	7	
Location Sample Depth		MW4	MW4	MW4	, MW3	MWI
Sample Number		8-MW4-GW2	8-MW4-GW2	7-MW4-GW2	7-MW3-GW3	1-MW1-GW2
Laboratory Sample ID		9607477-01	9607477-01	9607488-03	9607477-03	9607488-01
Matrix		water	water	water	Water	of cut
Date Sampled		7/11/96	7/11/96	7/11/96	96/11/2	7/11/9¢
Date Analyzed	-	7/23/96	Composite result	7/26/96	7/18/96	7/22/0
	CRQL				5	(1071)
1,2-Dichlorobenzene	_	1 UJ	1 UJ	æ	1111	
1,2-Dibromo-3-chloropropane	_	1 UJ	10.1	· 6		
Xylene (total)		1111		1 000	3:	
Total TIC concentration				0.32	1 01	
Units (ug/kg) Soil, (ug/L) Water	ng/L			38	0	
Dilution Factor	1	_	Composite result	-	•	
Sample Weight/Volume		25 0 ml	7\$ 0 ml		1	-

The PADW-1 FB-PW-GW2 FB-DI-GW2 Boom and a second and a se	Semivolatile Organic Compounds	_				۰
PADW-1   Pap-W-GW2   Pap-GW2   Pap	Sample Denth					MW4
10   10   10   10   10   10   10   10	Sample Number	PADW-1	FB-PW-GW2	FB-DI-GW2	DCPW-1	8-MW4-GW2
Name	Laboratory Sample ID	9607483-02	9607481-02	9607481-01	9607483-01	9607477-01
CRQL 11196 771196 771196 77239	Matrix	water	water	water	water	water
CROY,   Dig   Di	Date Sampled	7/11/96	7/11/96	7/11/96	7/11/96	7/11/96
CRQL  10  10  100  100  100  100  100  100	Date Analyzed	7/24/96	7/23/96	7/23/96	7/24/96	7/23/96
10   10   10   10   10   10   10   10	CRC	Or				
10   10   10   10   10   10   10   10			10 U	10 Ω	10 U	10 U
10 10 10 10 10 10 10 10 10 10 10 10 10 1			10 U	10 U	42	10 O
10 10 10 10 10 10 10 10 10 10 10 10 10 1			10 U	10 U	10 U	10 U
10 10 U 1	zene		10 U	10 U	10 U	10 U
10 10 U 1			10 U	10 U	10 U	10 U
10       10 U       10 U         10			10 U	10 U	10 U	10 U
10			10 U	10 U	10 U	10 U
te         10         10 U         10 U           stopylamine         10         10 U         10 U         10 U           stopylamine         10         10 U         10 U         10 U         10 U           and         10         10 U         10 U<			10 U	10 U	10 U	10 U
roopylamine         10         10 U         10 U           roopylamine         10         10 U         10 U         10 U           rool         10         10 U         10 U         10 U         10 U           rool         10         10 U         10			10 U	10 U	10 U	10 U
10   10 U   10	opylamine 1		10 U	10 U	10 U	10 U
10   10 U   10	:		10 U	10 U	10 U	10 U
10 10 0 10 0 10 0 10 0 10 0 10 0 10 0			10 U	10 U	10 U	10 U
10 10 U 1			10 U	10 U	10 U	10 U
10 10 U 1			10 U	10 U	10 U	10 U
10 10 U 1			10 U	10 U	10 U	10 U
10 10 U 1			10 U	10 U	10 U	10 U
ene 10 10 U			10 U	10 U	10 U	10 U
10       10 U       10 U         25       25 U       25 U         10       10 U       10 U         10       10 U       10 U         10       10 U       10 U         25       25 U       25 U         25       25 U       25 U         26       25 U       25 U         10       10 U       10 U         10       10 U       10 U         10       10 U       10 U	ene		10 U	10 U	10 U	10 U
10     10 U     10 U       25     25 U     25 U       10     25 U     25 U       10     10 U     10 U       25     25 U     25 U       25     25 U     25 U       25     25 U     25 U       10     10 U     10 U       10     10 U     10 U       10     10 U     10 U			10 U	10 U	10 U	10 OI
10     10 U     10 U       25     25 U     25 U       10     25 U     25 U       10     10 U     10 U       25     25 U     25 U       25     25 U     25 U       25     25 U     25 U       10     10 U     10 U       10     10 U     10 U       10     10 U     10 U			10 U	10 U	10 U	10 U
10     10 U     10 U       10     10 U     10 U       10     10 U     10 U       24     25 U     25 U       10     25 U     25 U       10     25 U     25 U       10     10 U     10 U       10     10 U     10 U       10     10 U     10 U       25     25 U     25 U       25     25 U     25 U       25     25 U     25 U       10     10 U     10 U			10 U	10 U	10 U	D 01
10     10 U     10 U       10     10 U     10 U       25     25 U     25 U       10     25 U     25 U       10     25 U     25 U       10     10 U     10 U       25     25 U     25 U       25     25 U     25 U       10     10 U     10 U	,		10 U	10 U	10 U	10 U
10     10 U       10     10 U       25     10 U       10     25 U       10     25 U       25     25 U       10     10 U       25     25 U       25     25 U       25     25 U       25     25 U       10     10 U       10     10 U       10     10 U       10     10 U			10 U	10 U	10 U	10 U
10     10 U     10 U       25     25 U     25 U       10     10 U     10 U       25     25 U     25 U       10     10 U     10 U       10     10 U     10 U       10     10 U     10 U       25     25 U     25 U       25     25 U     25 U       10     10 U     10 U			10 U	10 U	10 U	10 U
25       25 U       25 U         10       10 U       10 U         25       25 U       25 U         10       10 U       10 U         10       10 U       10 U         10       10 U       10 U         25       25 U       25 U         25       25 U       25 U         10       10 U       10 U         10       10 U       10 U			10 U	10 U	10 U	10 U
10     10 U     10 U       25     25 U     25 U       10     10 U     10 U       10     10 U     10 U       10     10 U     10 U       25     25 U     25 U       25     25 U     25 U       10     10 U     10 U       10     10 U     10 U       10     10 U     10 U			25 U	25 U	25 U	25 U
25     25 U       10     10 U     10 U       10     10 U     10 U       10     10 U     10 U       24     25 U     25 U       25     25 U     25 U       10     10 U     10 U       10     10 U     10 U       10     10 U     10 U			10 U	10 U	10 U	10 U
10     10 U     10 U       10     10 U     10 U       10     10 U     10 U       25     25 U     25 U       26     25 U     25 U       10     10 U     10 U       10     10 U     10 U       10     10 U     10 U			25 U	25 U	25 U	25 U
10     10 U     10 U       10     10 U     10 U       25     25 U     25 U       26     25 U     25 U       10     10 U     10 U       10     10 U     10 U       10     10 U     10 U			10 U	10 U	10 U	. 10 U
10     10 U     10 U       10     10 U     10 U       25     25 U     25 U       10     10 U     10 U       10     10 U     10 U	2		10 U	10 U	10 U	10 OI
10     10 U     10 U       25     25 U     25 U       25     25 U     25 U       10     10 U     10 U       10     10 U     10 U			10 U	10 U	10 U	10 U
25 25 U 25 U 25 U 25 U 25 U 10 U 10 U 10 U			10 U	10 U	10 U	10 U
25 25 U 25 U 10 U 10 U 10 U 10 U			25 U	25 U	25 U	25 U
10 U 10 U 10 U 10 U 10 U			25 U	25 U	25 U	25 U
10 U 10 U			10 U	10 U	10 U	10 U
			10 U	10 U	10 U	10 U
25   25 U 25 U	4-Nitrophenol	25 U 25 U	25 U	25 U	25 U	25 U

Semivolatile Organic Compounds						
Site	_					•
Location						œ ;
Sample Depth						MW4
Sample Number		PADW-1	FR-PW-GW2	EB-DLGW2	· ANDOC	
Laboratory Sample ID		9607483-02	9607481-02	1.D-D1-QW2	DCFW-1	8-MW4-GW2
Matrix	_	water	reteur	10-184/00/	900/483-01	9607477-01
Date Sampled		2/11/2	7/11/96	7/11/05	Water	water
Date Analyzed		96/7/	20/25/7	70,000	111/96	7/11/96
	CROL		06.67.1	06/57/1	1/24/96	7/23/96
Fluorene	10	10 U	10 U	10 11	11 01	11.01
4-Chlorophenyl-phenylether	10	10 U	11 01	11.01		0.01
Diethylphthalate	10	U 01	11 01	5 5		0 01
4-Nitroaniline	25	25 11	25 11	25.50	0 00	0.01
4,6-Dinitro-2-methylphenol	25	2 2 2	0.62	25.0	25.0	25 U
n-Nitrosodinhenvlamine			0.62	O 67	2 <b>5</b> U	25 U
A. Promonhamil about detan		0.01	D 01	10 U	10 U	10 U
Time in the contract of the co	- OI :	10 O	10 U	10 U	10 U	10 U
Hexachlorobenzene	10	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	25	25 U	25 U	25 U	25 U	25 U
Phenanthrene	10	10 U	10 U	10 U	10 U	11 01
Anthracene	10	10 U	10 U	10 U	10 U	11 01
Carbazole	10	10 U	10 U	10 U	10 U	11 01
Di-n-butylphthalate	10	10 U	10 U	10 U	1.1	)
Fluoranthene	10	10 U	10 OI	10 U	D 01	11 01
Pyrene	10	10 U	10 U	10 U	10 U	11 01
Butylbenzylphthalate	10	10 U	10 U	10 U	11 01	11 01
3,3'-Dichlorobenzidine	10	10 U	10 U	10 U	11 01	11 91
Benzo[a]anthracene	10	10 U	10 U	10 U	11 01	11 01
Chrysene	10	10 U	10 U	10 U	10 D	11 01
bis(2-Ethylhexyl)phthalate	10	1 BJ	1 J	1 J	28 B	11 01
Di-n-octylphthalate	10	10 U	10 U	10 U	2.1	11 01
Benzo[b]fluoranthene	10	10 U	10 U	10 U	11 01	1101
Benzo[k]fluoranthene	10	10 U	10 U	10 U	1101	11 01
Benzo[a]pyrene	10	10 U	10 U	10 D	11 01	11 01
Indeno[1,2,3-cd]pyrene	10	10 U	10 U	10 U	11.01	11 01
Dibenz[a,h]anthracene	10	10 U	10 U	11 01	101	1101
Benzo[g, h, i]perylene	10	10 U	10 U	100	11 01	1101
Total TIC concentration		20	22	, %	52.1	33 23
Units (ug/kg) Soil, (ug/L) Water u	ng/L				// 1	32
Dilution Factor			1		-	•
Sample Weight/Volume		1000 mL	1000 mJ	10001	1-0001	T 000*
	-	!		4000 1111	TOOM INIT	1000 mL

Semivolatile Organic Compounds	_				
Site		7	7	-	
Location		MW4	MW3	MW1	
Sample Depth	CWA-CWA	CM5	7_MW3_GW3	I-MWI-GW2	
John Sample	7L096		9607777-03	0607488_11	
Matrix		water	water	water	
Date Sampled	_	7/11/96	7/11/96	7/11/96	
Date Analyzed		7/24/96	7/23/96	7/24/96	
CRQL					
bis(2-Chloroethyl)ether 10		10 U	10 U	10 U	
Phenol 10		10 U	10 U	10 U	
2-Chlorophenol		10 U	10 U	10 U	
1,3-Dichlorobenzene 10		10 O	10 U	10 U	
1,4-Dichlorobenzene		10 U	10 U	10 U	
1,2-Dichlorobenzene		10 U	10 U	10 U	
2,2'- oxvbis(1-chloropropane) 10		10 U	10 U	10 U	
2-Methylphenol 10		10 U	10 U	10 U	
Hexachloroethane 10		10 U	10 U	10 U	
N-Nitroso-di-n-propylamine 10		10 O	10 U	10 U	
4-Methylphenol 10		10 O	10 U	10 U	
Nitrobenzene 10		10 U	10 U	10 U	
Isophorone 10		10 U	10 U	10 U	
2-Nitrophenol		10 U	10 U	10 U	
2.4-Dimethylphenol		10 U	10 U	10 U	
bis(2-Chloroethoxy)methane 10		10 U	10 U	10 U	
2.4-Dichlorophenol		10 U	10 U	10 U	
1,2,4-Trichlorobenzene		10 U	10 U	10 U	
Naphthalene 10		10 U	10 U	10 U	
4-Chloroaniline		10 U	10 U	10 U	
Hexachlorobutadiene 10		10 U	10 U	10 U	
4-Chloro-3-methylphenol		10 U	10 U	10 U	
2-Methylnaphthalene 10		10 U	10 U	10 U	
Hexachlorocyclopentadiene 10		10 U	10 U	10 U	
2,4,6-Trichlorophenol		10 U	10 U	10 U	
2,4,5-Trichlorophenol		25 U	25 U	25 U	
2-Chloronaphthalene		10 U	10 U	10 U	
2-Nitroaniline 25		25 U	25 U	25 U	
Acenaphthylene 10		10 U	10 U	10 U	
9		10 U	10 O	10 U	
2.6-Dinitrotoluene		10 U	10 U	10 U	
Acenaphthene 10		10 U	10 U	10 U	
		25 U	25 U	25 U	
jou		25 U	25 U	25 U	
		D 01	10 U	10 U	
ene		10 U	10 U	10 U	
		25 U	25 U	25 U	
	_	,	1		

	7	MW3 MW1		3W3 1-MW1-GW2			1		10 U 10 U							10 U 10 U	25 U 25 U	10 U 10 U	10 U 10 U	10 U 10 U	10 U 10 U	10 U , 10 U	10 U 10 U	10 U 10 U	. 10 U 10 U	10 U 10 U	n	13 60										
-	7	MW4		7-MW4-GW2 7-MW3-GW3	9607488-03 9607477-03	water		7/24/96 7/2	10	10 I 10 U	10 U 10 U	25 25 U	25 25 U	10 U	10 U	10 T 10 U	25 25 U	10 U	10 1 1 J	10 D 01	10 U	10 J	1 6 0	.0 10 U			.0 2 J				0 2 J	1.1		0 10 U		1070	/L	
Semivolatile Organic Compounds		Location	Sample Depth	Sample Number	Laboratory Sample ID	Matrix	Date Sampled	Date Analyzed		4-Chlorophenyl-phenylether	Diethylphthalate 10		nol		nylether	v	enol	ne ne	4)		halate	thene			ne	ınthracene		thalate			thene		•	ō	Benzo[g,h,i]perylene 10		Units (ug/kg) Soul, (ug/L) Water ug/L	10101

Inorganics	•					
Site	-					8 MW4
Sample Depth						
Sample Number		PADW-1	FB-PW-GW2	FB-DI-GW2	DCPW-1	8-MW4-GW2 (Diss.)
Laboratory Sample ID		9607483-02	9607481-02	9607481-01	9607483-01	9607477-02
Matrix		water	water	water	water	water
Date Sampled		7/11/96	7/11/96	7/11/96	7/11/96	7/11/96
Date Analyzed		7/23/96 - 8/2/96	7/23/96 - 8/2/96	7/23/96 - 8/2/96	7/23/96 - 8/2/96	7/23/96 - 8/2/96
	CRDL				4	
Antimony	9 *	5 U	N S	5 U	7.2 MW	3.0
Arsenic	10	1.8 B	2.9 BW	1.3 B	8 BW	1 0
Barium	200	29.9 B	53.3 B	4 U	31.8 B	87.3 J
Beryllium	*	0.3 U				
Cadmium	~	2 U	2 U	2 U	2 U	2 U
Chromium	01	. n9	6.3 B	n 9	24.3	n 9
Copper	25	4 U	12.1 B	4 U	13 B	4 U
Lead	E	1 U	2.6 B	10	1 0	1 U
Mercury	0.2	0.2 U				
Nickel	40	5 U	5 U	2 U	D 8	o s
Selenium	\$	1.8 B	1 UW	1 UW	5 U	1 U
Silver	10	3.0	3 U	3.0	3 U	3 U
Thallium	*2	2 UW	2 U	2 U	2 UW	2 U
Zinc	20	9.2 B	1180	4.5 B	26.2	11.8 U
Units (mg/kg) Soil, (ug/L) Water	7/8n					
* Project-specific CRDL				•		

Inorganics						
Site		œ	7	7	7	۲
Location		MW4	MW4	MW4	MW3	, MW3
Sample Deput		8-MW4-GW2	7-MW4-GW2 (Dies.)	CW2.AWA-7	TAMES CITE CITE	
I aboratory Sample ID		10 55450	(1000)	TAP HATE	/-IVI W 3-C W 3 (LISS.)	/-IM W3-CW3
Second Sample II		360/4//-0I	960/488-04	9607488-03	9607477-04	9607477-03
Matrix		water	water	water	water	water
Date Sampled	•	7/11/96	7/11/96	7/11/96	7/11/96	7/11/96
Date Analyzed		7/23/96 - 8/2/96	7/23/96 - 8/2/96	7/23/96 - 8/2/96	7/23/96 - 8/2/96	96/2/8 - 96/82/1
	CRDL					
Antimony	9*	f 9	5 U	5 U	SU	11 5
Arsenic	10	1 UJ	1.5 J	2.3 J	1 U	
Barium	200	135 J	269	371	53.4 J	102 J
Beryllium	*	0.3 U	0.3 U	0.5 J	0.3 U	0.4 J
Cadmium	s	2 U	2 U	2 U	2 U	2 U
Chromium	10	13.6	1.7 J	21.6	9.7 J	11.3
Copper	22	4 U	U 4	7.8 J	4 U	U 4
Lead	٤	1.4 J	1 U	2.7 J	1 U	1.6 J
Mercury	0.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	40	5 U	ns.	13.5 J	5 U	S U
Selenium	5	10	1 01	1 UJ	1 U	I UI
Silver	10	3.0	3 U	D.E.	3 U	Ωε
Thallium	* 2	2 UJ	2 UJ	2 U	2 UJ	2 UJ
Zinc	20	31.4	11 U	50.5	14.2 U	43.8
Units (mg/kg) Soil, (ug/L) Water * Project-specific CRDL	T/Sn					

		MW1		I-GW2	18-01	water	9/11/	96/7./8		S U	1.7 J	36.6 J	0.3 U	2 U	I 6.9	4 U	10	0.2 U	5 U	3.9 J	3 U	2 U	109	
	1	MW1			9607488-02					n s	10	30.8 J	0.3 U	2 U	8,2 J	4 U	10	0.2 U	5 U	4.1 J	3 U	2 UJ	80.8	
Inorganics	Site	Location	Sample Depth	mple Number	Laboratory Sample ID	Matrix	Date Sampled	Date Analyzed	CRDL	Antimony * 6	Arsenic 10	Barium 200	ayllium * 4	Cadmium 5	uromium 10	pper 25	ad 3	Mercury 0.2	ckei 40	Selenium 5	Silver 10	Thallium * 2	Zinc 20	I Inite (madle) Cail (mall ) Water

JP4, Gas, Diesel, Oil						
Site						••
Location						MW4
Sample Depth						
Sample Number		PADW-1	FB-PW-GW2	FB-DI-GW2	DCPW-1	8-MW4-GW2
Laboratory Sample ID		9607483-02	9607481-02	9607481-01	9607483-01	9607477-01
Matrix		water	water	water	water	water
Date Sampled		7/11/96	7/11/96	7/11/96	7/11/96	7/11/96
Date Analyzed		7/18-25/96	7/18-25/96	7/18-25/96	7/18-25/96	7/18-24/96
	*RL					
Gasoline range	0.25	0.25 U	0.25 U	0.25 U	0.25 U	0.25 UJ
Diesel range, as diesel	0.25	0.26	0.25 U	0.25 U	0.39	0.25 U
Oil range, as oil	-	1.0	10	1 U	10	10
JP-4	0.25	0.25 U				
Units (mg/kg) Soil, (mg/L) Water					-	
* RL - Reporting Limit	_					

VA-7	7 MW4 7-MW4-GW2 9607488-03 water 7/11/96	7 MW3 7-MW3-GW3 9607477-03 water 7/11/96	1 MW1 1-MW1-GW2 9607488-01 Water
	7/18-25/96	7/18-24/96	7/18-25/96
* RL			
0.25	0.48 J	0.25 UJ	R
0.25	1.8	0.26 NJ	0.36 NJ
	1 U	1 U	10
0.25	7.7	0.25 U	0.25 U

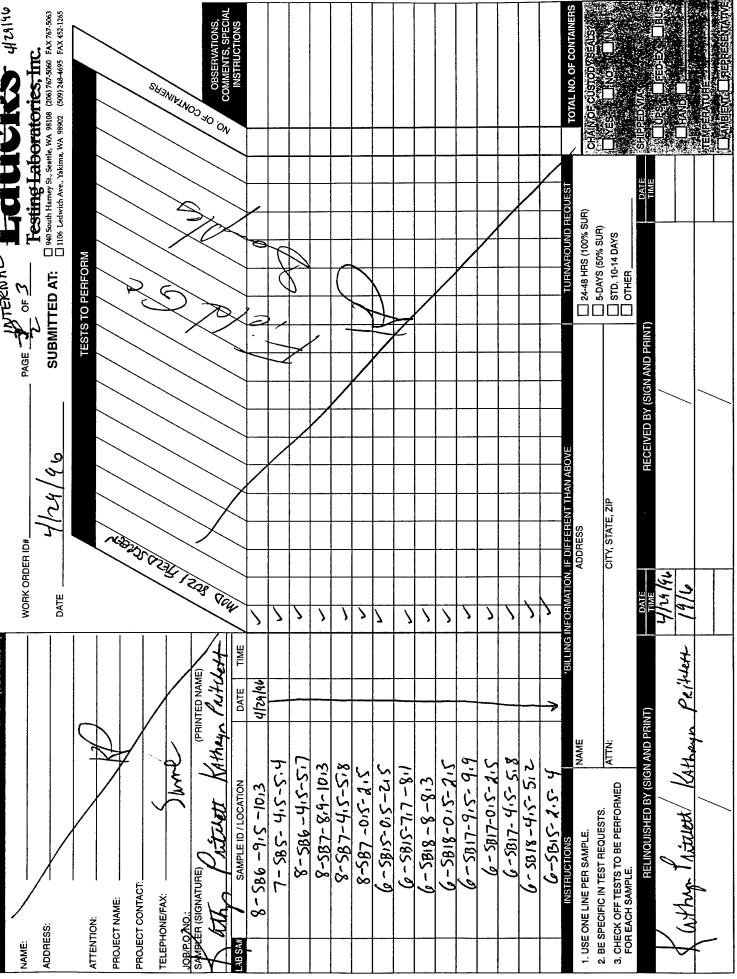
Inorganics	•				
Site		∞	<b>∞</b>	<b>∞</b>	•
Location			SB9	SB9	SB9
Sample Depth			8.5-9.4	4.5-5.5	8-SB9-1-3
Sample Number		8-RB2	8-SB9-8.5-9.4	8-SB9-4.5-5.5	8-SB9-1-3
Laboratory Sample ID		9605024-11	9605024-06	9605024-05	9605024-04
Matrix		water	soil	lios	lios
Date Sampled		4/30/96	4/30/96	4/30/96	4/30/96
Date Analyzed	,	5/9/96 - 6/14/96	5/9/96 - 6/14/96	5/9/96 - 6/14/96	5/9/96 - 6/14/96
	CRDL				
Antimony	9*	s UW	0.86 UJ	0.84 UJ	US 56:01
Arsenic	10	NO 1	s	3.1	22.4
Barium	200	4 U	209	130	168
Beryllium	*	0.3 U	0.42 J	0.3 J	0.53 J
Cadmium	s	2 U	0.35 U	0.35 U	0.36 U
Chromium	10	Ω9	14.5	7.3	11.1
Copper	25	4 U	10.9	24.9	36.6
Lead	3	10	6.5	6.1	17.2
Mercury	0.2	0.2 U	U 200	U 60.0	0.11 U
Nickel	40	0 S	10.9	7.9	9.2
Selenium	\$	10	0.17 UJ	0.17 UJ	U 61.0
Silver	10	3 U	0.53 U	0.53 U	0.53 U
Thallium	*2	2 U	0.34 U	0.33 U	0.38 U
Zinc	20	11 B	56	56.4	67.8
Units (mg/kg) Soil, (ug/L) Water % Solids * Proiect-specific CRDL	T/Bn	0	91'6	91.2	87.8
	-				

Inorganics	•				
Site	•	7	7	9	9
Location		SBS	SBS	SB16	SB16
Sample Depth		4.5-5.4	1-3.	8.5-9.5	3.9-4.5
Sample Number		7-SB5-4.5-5.4	7-SB5-1-3	6-SB16-8.5-9.5	6-SB16-3.9-4.5
Laboratory Sample ID		9604830-02	9604830-01	9605024-03	9605024-02
Matrix		lios	lios	soil	soil
Date Sampled		4/27/96	4/27/96	4/30/96	4/30/96
Date Analyzed	_	5/9/96 - 6/14/96	5/9/96 - 6/14/96	5/9/96 - 6/14/96	5/9/96 - 6/14/96
	CRDL			100 110 110 110 110	
Antimony	9*	0.85 UJ	U 68:0	0.91 UJ	0.86 UJ
Arsenic	10	1.9	11.1	3.1	7.2
Barium	200	132	158	115	250
Beryllium	*	0.33 J	0.78	0.23 J	0.37 J
Cadmium	٠	0.34 U	0.37 U	0.36 U	0.36 U
Chromium	10	7.2	14.2	10.5	12
Copper	25	16	32.1	8.8	17.6
Lead	3	17.5	13.5	4.6	8.5
Mercury	0.2	0.08 U	0.08 U	O 60'0	0.08 U
Nickel	4	7.2	13.6	5.6 J	9.4
Setenium	2	0.17 UJ	0.18 UJ	0.18 UJ	U 71.0
Silver	10	0.52 U	0.56 U	0.54 U	0.53 U
Thallium	*2	0.34 U	0.36 U	0.36 U	0.35 U
Zinc	20	55.3	68.6	34.9	40.6
Units (mg/kg) Soil, (ug/L) Water	ng/L	•	1	4 60	
% Solids		91.6	85.7	92.5	5.06
* Project-specific CRDL	_				

9	DW1	146	14.6	30-04	lios	4/27/96	14/96		0.86 111	3.0	273	0.33.1	0.33 U	13.1	14.9	56.6	0.12 U	8.6	0.17 UJ	0511	0.34 U	52.5	90.6
9			MG-9	9604830-05		/4	96/6/\$		US 500	3.3	259	0.25 J	0.33 U	16.5	34.2	19.1	0.1 U	7.8	0.19 UJ	0.5 U	0.38 U	65.3	92.4
9	SB16	0.9-3.9	6-SB16-0.9-3.9	9605024-01	lios	4/30/96	5/9/96 - 6/14/96		0.91 UJ	15.2	199	0.52 J	0.35 U	10.4	41.7	14.8	0.09	10.7	0.18 UJ	0.52 U	0.36 U	64.2	87.7
								CRDL	9*	10	200	* 4	5	10	25	3	0.2	40	\$	10	*2	20	r ug/L
Inorganics Site	Location	Sample Depth	Sample Number	Laboratory Sample ID	Matrix	Date Sampled	Date Analyzed		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc	Units (mg/kg) Soil, (ug/L) Water % Solids * Project-specific CRDI.

### APPENDIX F CHAIN OF CUSTODY

Laucks M. 4/21/96 AMBIENT | REPRESENTATIVE □UPS □FED-EX □BUS | **Esting Laboratories, Inc.** | 940 South Hamey St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063 | 1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX 452-1265 TEMPERATURE TOTAL NO. OF CONTAINER CHAIN OF CUSTODY SEALS? **ջ** □ NO. OF CONTAINERS HAND ... SHIPPED VIA: ☐ YES 24-48 HRS (100% SUR)
5-DAYS (50% SUR)
TD: 10-14 DAYS
OTHER TESTS TO PERFORM INTERNIA SUBMITTED AT: RECEIVED BY (SIGN AND PRINT) PAGE CHAIN OF COVIOUY RECORD DIFFERENT THAN ABOVE 40 CITY, STATE, ZIF 1208 N33755 Q 23/3 ADDRESS WORK ORDER ID# DATE 7 Technologies losp. THE THE POPULATION WHEE BE USED FOR THE POPULING FOR SEE BELOW) Kathayn Paitlett Athern Pethot TIME Charjadel 1483-580 3480 Churinadel (PRINTED NAME) 4/29/96 the lob3 Emon Valley DATE RELINQUISHED BY (SIGN AND PRINT) NAME "Sned Fulls (413) 483-8026, S-288-9, 5-10, S 5-5-5-4-885-8 ATTR 6-12-7.5-7.6 8-5B6-015-24 7-DW1-1,2-3,2 8-508-015-415 7-536-3,5-5.5 7-585-4,5-5,4 - DW1-3,2 -4,2 Richael 8-212-985-1 9-1-1-1-1MQ-9 7-587-1-3 Och Rigge 7-587-8-8,3 9.8-8-585-7 SAMPLE ID / LOCATION Michael 3. CHECK OFF TESTS TO BE PERFORMED FOR EACH SAMPLE. Operation 101-7508 when 7-585-1-3 2. BE SPECIFIC IN TEST REQUESTS. 1. USE ONE LINE PER SAMPLE. (SIGNATURE) PROJECT CONTACT: TELEPHONE/FAX: PROJECT NAME: ATTENTION: ADDRESS NAME AB SA#



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Lauces Alada	Testing Laboratories, Inc.  940 South Hamey St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063  11106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX 452-1265		Stay	OBSERVATIONS, COMMENTS, SPECIAL							REQUEST TOTAL NO. OF CONTAINERS	CHÁINOFCUSTÓDY, SEALS.  CHÁINOFCUSTÓDY, SEALS.	T CHIDDEN	TIME DVS TEED.EX BUS	TEMPERATURE AND STATES	_
TERNA	- PAGE 3 OF 3 TE TE SUBMITTED AT: 10 106 1	TESTS TO PERFORM									TURNAROUND REQUEST	24-48 HHS (100% SUR)		ilgn And Phint)		
CHAIN OF CUSTODY RECORD	WORK ORDER ID#	1 1 100	The state of the s					· · · · · · · · · · · · · · · · · · ·			FORMATION, IF DIFFERENT THAN ABOVE ADDRESS	CITY, STATE, ZIP	DATE	m 1 >	9/1/	
AND THE POPULOGISTIC SEED FOR HEPORTING/BILLING* (SEE BELOW)			Lame	CATION PATE TIME	-2 4/29h						BILLING INFORMA	STS. ATTN:	LE. DELINICITICATED DV JOINNIAND DRINAN	KAMON POILLIA	]	
MANNE	ADDRESS:	ATTENTION: PROJECT NAME:	PROJECT CONTACT:TELEPHONE/FAX:	SAMPLE (SIGNATURE)  A A A A A A A A A A A A A A A A A A A							INSTRUCTIONS  1 LISE ONE LINE PER SAMPLE	2. BE SPECIFIC IN TEST REQUESTS. 3. CHECK OFF TESTS TO BE PERFO	FOR EACH SAMPLE.	Att Potted		

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### TOTAL NO. OF CONTAINERS Testing Laboratories, Inc. □ 940 South Hamey St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063 □ 1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX 452-1265 1715 S/3196 ON OF CONTAINERS Laucks 24-48 HRS (100% SUR) 9436691460 STD. 10-14 DÄYS OTHER **TESTS TO PERFORM** SUBMITTED AT: RECEIVED BY (SIGN AND PRINT) CHAIN OF CUSTODY RECORD CI IFNT COPY 80 8. BILLING INFORMATION, IF DIFFERENT THAN ABOV CITY, STATE, ZIP ADDRESS 131 WORK ORDER ID#\_ 100 5/3/96 3:301 XIVE 2 450 11. GHAZITADFA dosici 450P 9.45 4:150 34:01 36/45 13.14 11:05 TELEPHONEFAX: (423) 483-8020 (423) 483.2800 #HISINF⊖AMATION WILL BE USED FOR REPORTING/BILLING\* (SEE BELOW) TIME M. GHAZ12.40FH 37830 (PRINTED NAME) ShazizADE H DATE RELINQUISHED BY (SIGN AND PRINT) 12.7.2. NAME 3. CHECK OFF TESTS TO BE PERFORMED FOR EACH SAMPLE. ", SAMPLE ID / LOCATION specifican 7-MW2-20.5 -MW3 - 20.5 - MW4-20.5 - MW5-20.5 2. BE SPECIFIC IN TEST REQUESTS. - MW2-GWI 9056-101 -MW2 -20 1. USE ONE LINE PER SAMPLE. Great INSTRUCTIONS - 784 SAMPLER (SIGNATURE) PROJECT CONTACT:\_\_ PROJECT NAME: JOB/P.O. NO.: ATTENTION: ADÓRESS: AB SA# NAME

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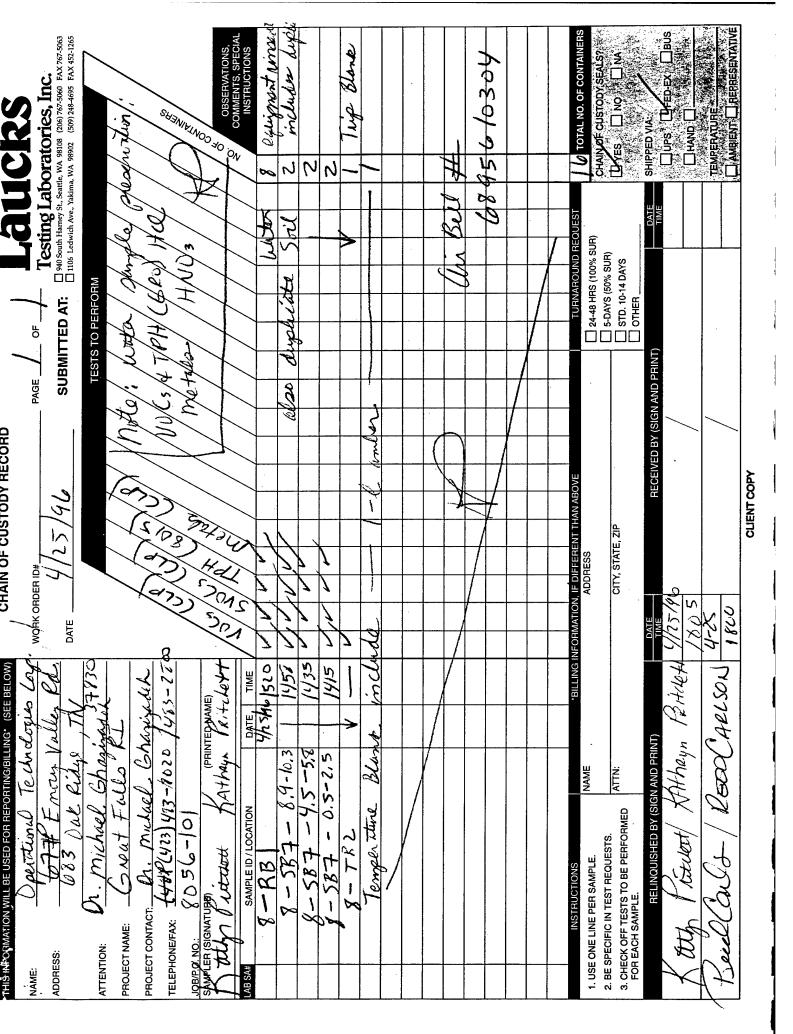
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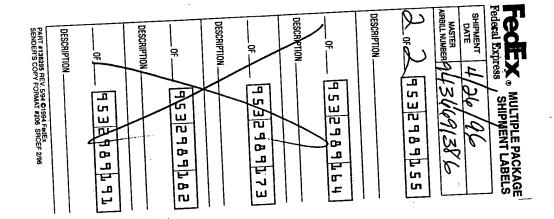
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☐ 940 South Hamey St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063

☐ 1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX 452-1265 Unplusto SKISWIKINOS 40 ON Laucks 24-48 HBS (100% SUR)
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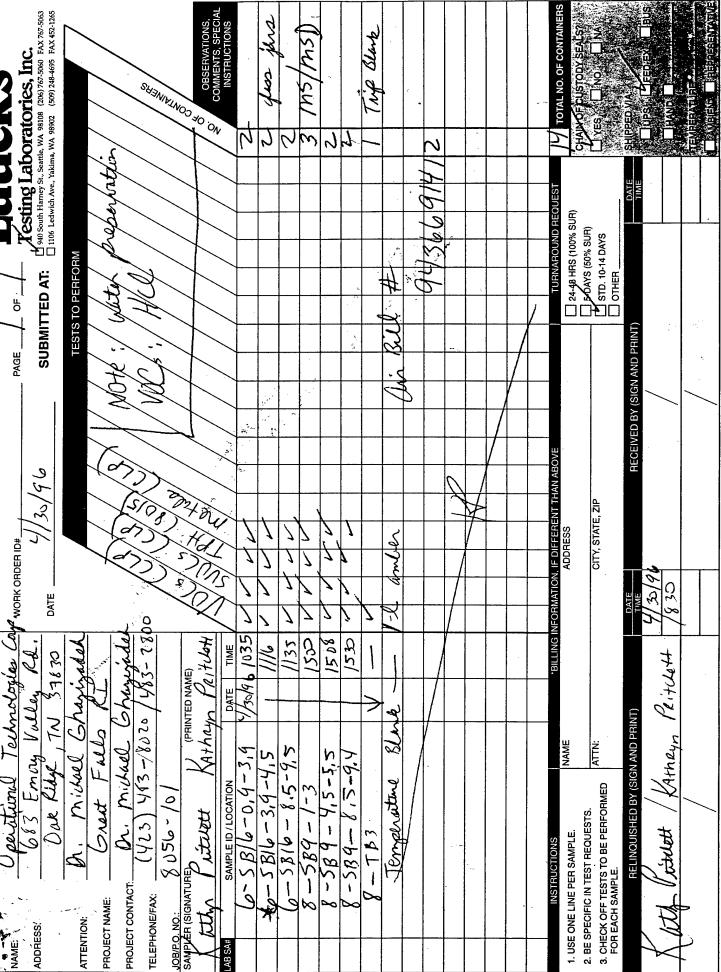
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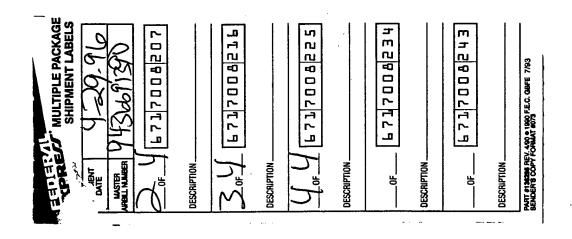
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Testing Laboratories, Inc.  1940 South Hamey St., Seattle, WA 98108 (206) 767-3040 FAX 767-3043	Untitled (1 SE OBSERVATIONS, COMMENTS, SPECIAL INSTRUCTIONS	3 temperature Blane 0786045216	TURNAROUND REQUEST  TOTAL NO. OF CONTAINERS 24-49 HPS (100% SUR) STD. 10-14 DAYS OTHER  OTHER  BHIPPEDYNIA TIME TIME THEN PERATURE THEN PERATU
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3 Testing Laboratories, Inc.

Fyo South Hamey 54, Seattle, WA 99102 (206) 767-5063

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Festing Laboratories, Inc. 1106 Ledwich Ave., Yakima, WA 98108 (206) 767-5060 FAX767-5063 TOTAL NO. OF CONTAINEF INSTRUCTIONS hip Blan NO. OF CONTAINERS TURNAROUND REQUEST 1 24-48 HP6 (100% SUR) 1 5-PAYS (50% SUR) 1 STD. 10-14 DAYS 1 OTHER TESTS TO PERFORM SUBMITTED AT: RECEIVED BY (SIGN AND PRINT) CHAIN OF CUSTODY RECORD BILLING INFORMATION, IF DIFFERENT THAN ABOV 女皇 CITY, STATE, ZIP ADDRESS イント WORK ORDER ID# 2/16/96 DATE (PRINTED NAME) Athayn PRITLE 80/ 1146 945 sentiind Technologies VILL BE USED FOR REPORTING/BILLING. (SEE BELOW) TIME CO 82 -1,8, DATE RELINQUISHED BY (SIGN AND PRINT) (425) 463-8020/4 6W2A NAME Blank -my-2-62 Fron Princet 8056-101 3. CHECK OFF TESTS TO BE PERFORMED FOR EACH SAMPLE. SAMPLE ID / LOCATION B. 38 1-KMS-200 ment stilet) 2. BE SPECIFIC IN TEST REQUESTS. emperature 18-H 1. USE ONE LINE PER SAMPLE. INSTRUCTIONS (SIGNATURE) PROJECT CONTACT: TELEPHONE/FAX: PROJECT NAME: ATTENTION:

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SUBMITTED AT: 1106 Ledwich Ave., Yakima, WA 98002 (509) 248-4695 FAX 452-1265 tuel reduc NO OF CONTAINERS TURNAROUND REQUES ☐ 24-48 HBS-(100% SUR) ☐ 5-BAY'S (50% SUR) [Z STD. 10-14 DAYS ☐ OTHER TESTS TO PERFORM RECEIVED BY (SIGN AND PRINT) CHAIN OF CUSTODY RECORD allibration CLIENT COPY BILLING INFORMATION, IF DIFFERENT THAN ABOV CITY, STATE, ZIP ADDRESS WORK ORDER ID# 5//3/46 1420 DATE 7/3/96/60 echnologie TN 3782 PRINTED NAME) PRIT THIS INECRMATION WILL BE USED FOR REPORTING/BILLING. (SEE BELOW) TIME Kathat Rithat sharradel DAJÉ. RELINQUISHED BY (SIGN AND PRINT) 483-80100 NAME T B - mwl - FP water Prise 3. CHECK OFF TESTS TO BE PERFORMED FOR EACH SAMPLE. SAMPLE ID / LOCATION لم م SALA 2. BE SPECIFIC IN TEST REQUESTS. 565 1. USE ONE LINE PER SAMPLE. 7 p 8 (۲۲۶) INSTRUCTIONS Eth PROJECT CONTACT: TELEPHONE/FAX: PROJECT NAME: ATTENTION: SAMPLER (9 ADDRESS: LAB SA# NAME

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TO: Ms. Kathy Kreps FAX #: 26, 1- 767- 5063
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940 South Hainey Street (INCLUDING HEADER SHEET)
Seattle, WA 98/08 To: Ms. Kathy Kreps.
FROM: Michael Moe Guzinden Oftech Cirporation
Oak Ridge, The 37830
423-483-8020
SUBJECT: Change of Safe Number
REPLY REQUESTED: YESNO
MESSAGE: Please Change Sople Namber 1-MW2-GW2
to 1-Mw2-GW3.
Michael M. Chaziendeh Ph.D

☐ AMBIENT ☐ REPRESENTATIVE ☐ UPS ☐ FED-EX ☐ BUS TOTAL NO. OF CONTAINERS 940 South Harney St., Seattle, WA 98108 (206) 767-5060 FAX 767-5063 [ 1106 Ledwich Ave., Yakima, WA 98902 (509) 248-4695 FAX 452-1265 CHAIN OF CUSTODY SEALS? NO □ Testing Laboratories, Inc. TEMPERATURE, SARWATNOD SO ON ☐ HAND Laucks SHIPPED VIA: ☐ YES 24-48 HRS (100% SUR) 5-DAYS (50% SUR) TESTS TO PERFORM SUBMITTED AT: 0 Ь RECEIVED BY (SIGN AND PRINT) 7 Bob PAGE 0 CHAIN OF CUSTODY RECORD INFORMATION, IF DIFFERENT THAN ABOV ADDRESS 1 CITY, STATE, ZIP 3 WORK ORDER ID# Ę 19/12 934 96 DATE 1800 DATE 7 1230 HUSANFORMATION WILL BE USED FOR REPORTING/BILLING. (SEE BELOW) TIME Bien 13 163-2800 (PRINTED NAME) 3 7 63 8 720196 971/6 3. J. J. J. 27-16 DATE RELINQUISHED BY (SIGN AND PRINT) DAMILE 7///2 NAME ATTR 2 1 N 1 1 1 0405 39 3. CHECK OFF TESTS TO BE PERFORMED FOR EACH SAMPLE. SAMPLE ID / LOCATION 7 1210 Mich. Michie 2. BE SPECIFIC IN TEST REQUESTS. OpterH ステムナ 1. USE ONE LINE PER SAMPLE. 115K VEL ₹. INSTRUCTIONS d 3 TELEPHONE/FAX: 423 3 99 3 W PROJECT CONTACT: 12 Ę SAMPLER (SIGNATURE) PROJECT NAME: JOB/P.O. NO.: ATTENTION: ADDRESS: AB SA NAME

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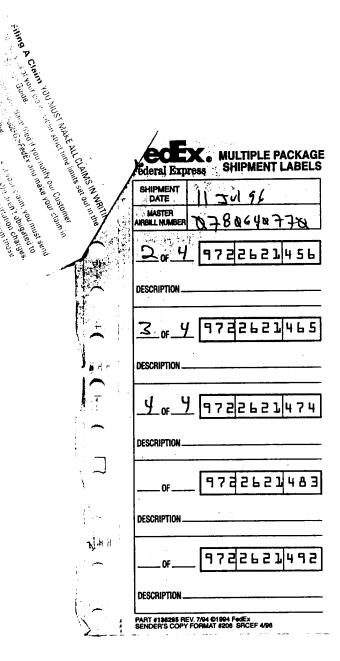
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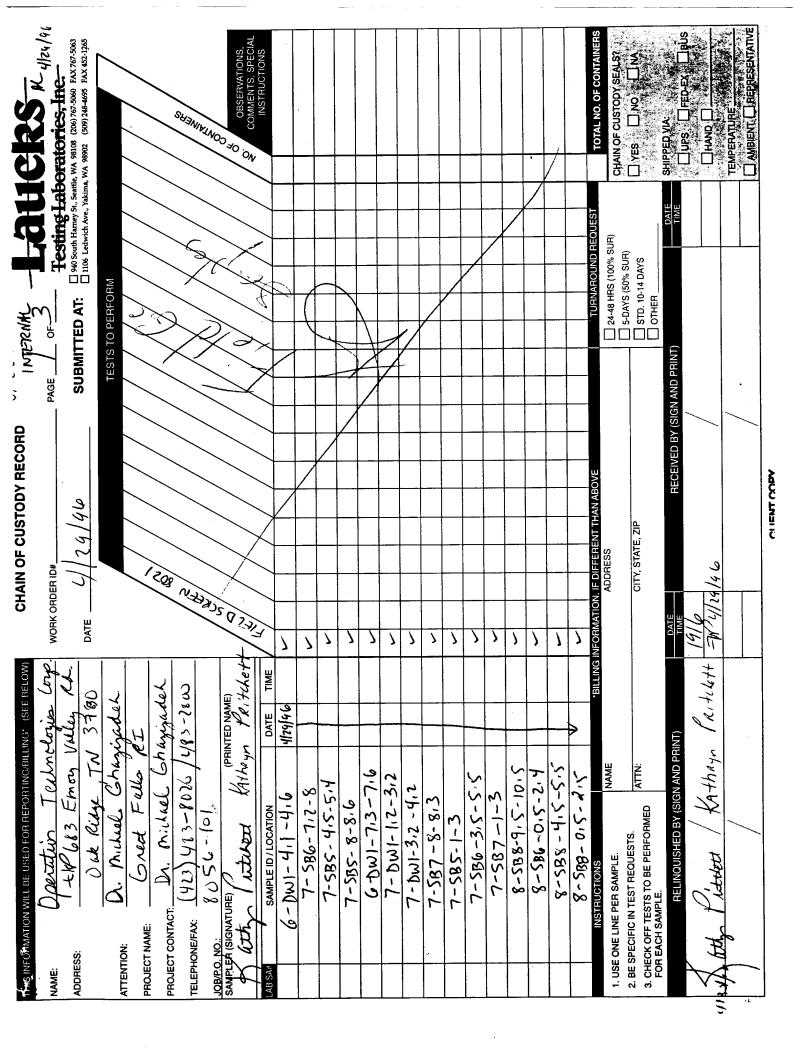
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3-5-3-0-28-8	>		
6-5815-015-215	7		
1.8-2.75.3185-0	,		
6-5818-8-813	\		
5-2818-0-212	>		
6-6-2165-9	`		
5-2-2-2-9	)		
6-5017-4.5-5.8	`		
7.5-518-9.5	``\	•	
↑ 6 5.8 ×	WINDOW MALON IN DIFFERENCE IN IN A DOWN	TI IBNABOLIND BEOLIEST	
INSTRUCTIONS   NAME   BILLING	BILLING INFORMATION, IT DIFFERENT THAN ABOVE ADDRESS	24-48 HRS (100% SUR)	CHAIN OF CHEMON SEALISO
STS.	AIN ATSTE TIL	5-DAYS (50% SUR)	N L NEG. TO NO.
3. CHECK OFF TESTS TO BE PERFORMED  3. CHECK OFF TESTS TO BE PERFORMED	CIT, STAIE, ZIT	STD. 10-14 DAYS	
FOR EACH SAMPLE.  RELINQUISHED BY (SIGN AND PRINT)	DATE RECEIVED BY (SIGN AND PRINT)		ANIQE BAILES
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## APPENDIX G GEOTECHNICAL DATA



Operational Technologies Of Project Name: 8056-101

CL File No.: 57111-96124

# Geotechnical Analysis Results

Sample	Sample Sample	-Date/Time		Permeability	`	Total Porosity	Moisture Content	ontent	Bulk	Bulk Density	Specific Gravity	Medion Grafa	Total Organic
B	Location		υ	Empirical Intrinsic <sup>2</sup>	Empirica] Intrinsic	Ħ	Saturation	ASTR D-2216	Dry	Naturale	3m/cc	Stre (Trask)	og/kg
			Kair	\$ P	βαρ Cπ√sec		% PV	×	om/cc	om/cc			
6-CB1 E	4 5-5 7	4/26/1055	192	179	1.5 * 104	27.2	67.2	10.5	1.93	2.12	2.65	0.0722	420
6-6817			145	133	1.1 * 104	28.3	57.9	89 50	1.90	2.06	. 2.65	0.0584	1000
/100-0		4/26/	7690	7570	6.5 * 10 <sup>3</sup>	33.3	35.7	6.4	11.11	1.89	2.66	0.2574	1300
2T92-9	E.B. 6.2	479611290	1367	1345	$1.2 \times 10^3$	89.6	55.0	9.2	1.86	2.03	2.85	0.1562	320
6-5817	6.6-6.2	4/25/1443	107	96	8.2 * 108	24.4	69.3	8.5	2.01	2.18	2.66	0.1508	7900
AB - 0	6.0-6.7		<b>5</b> 2	n	1.8 * 10.5	23.4	79.8	9.3	2.04	27.2	99.2	0.1460	520
8-587	2.5-3.5		88	76	8.5 * 10°	28.0	90.0	13.1	1.91	2.16	2.65	0.1607	022
8-586	2.5-3.5		83	50	4.3 × 10 <sup>6</sup>	29.1	78.4	12.4	1.87	2.10	2.64	0.1308	2000

Measured and calculated using steady-state methods as described in API RP-40, <u>API Recommended Practice for Core-Analysis Procedure</u>, 1960.

 $<sup>^2</sup>$  Calculated from specific permeability using mathmatical relationship K $\infty$  = 0.68(Kair) $^{1.06}$ 

 $<sup>^3</sup>$  kp(cm/sec) \* ( $^4$  ( $^4$  ( $^4$  ) \* ( $^4$  ) ( $^4$ 

<sup>\* [(</sup>Water Mass)/(Dry Matrix Mass)] \* 100

<sup>5 (</sup>Dry Sample Noss)/(Bulk Volume)

e (fresh Sample Kase)/(Bulk Volume)

<sup>? (</sup>Dry Matrix Mass)/(Dry Matrix Volume)

3. CHECK OFF TESTS TO BE PERFORMED FOR EACH SAMPLE.  RELINGUISHED BY (SIGN AND PRINT)  M. Chairiel.  M. Chairiel.  M. Chairiel.  M. Chairiel.	100 PRINTED NAME  10 10 10 10 10 10 10 10 10 10 10 10 10 1	
Alo Si 20 1/11  Alo Si 20 1/11	WORK OFFICE IDM  WORK OFFICE IDM  PAGE  SU  TIME  TIME  TO STATE  ADDRESS  CHAIN OF COSTODY RECORD  PAGE  SU  TO STATE OF THE COSTODY RECORD  ADDRESS  CHAIN OF COSTODY RECORD  PAGE  SU  TO STATE OF THE COSTODY RECORD  PAGE  PAGE	
OTHER DATE	BMITTED AT:    OF   Testing Labor   Own South Harmy St. Seeth, We   Own South Harmy St. Seeth, We   Own St. Seeth   Own St. Se	
SHIPPED VIA:  UPS FED-EX SUS  HAVED  TEMPERATURE  AMBIENT HEPRESENTATIVE	CHAIN OF CUSTODY SEALS?  CATORIES INC.  A SOLD CHAIN OF CONTAINERS  CHAIN OF CUSTODY SEALS?  CHAIN OF CUSTODY SEALS?	るした。

### APPENDIX H AQUIFER SLUG TEST

#### APPENDIX H AQUIFER SLUG TEST DATA ANALYSIS

#### X.1 INTRODUCTION

Aquifer slug tests on seven monitor wells were performed to investigate the hydraulic properties of the fine-grained sandstone/siltstone bedrock. A detailed description of the data collection and analysis is presented in the following sections.

The slug test method is used to obtain data necessary to calculate the hydraulic conductivity of the subsurface material around the screened portion of a monitor well. The technique is based on measurements of the water level as a function of time after withdrawing a slug of known volume from the monitor well.

#### X.2 AQUIFER SLUG TEST PROCEDURE

The equipment used for slug testing included a Hermit Environmental Data Logger model SE1000C (serial #1KC-831), manufactured by *In Situ*, Inc. of Laramie, Wyoming. Also used was a pressure transducer model PTD-260 (serial #203217), manufactured by *In Situ*, Inc. Either an acrylic slug (1.25 inches in diameter and 4 feet in length) or a polyvinyl chloride slug (1.25 inches in diameter and 2.5 feet in length) was used to produce the initial water displacement.

Prior to testing, the monitor well was developed and the water level allowed to stabilize. The slug was decontaminated using standard procedures prior to performing the slug test.

Immediately upon opening, the headspace of the monitor well to be slug tested was tested for volatile organic vapors using a photoionization detector. Next, the initial water level was measured and recorded in the field logbook and the pressure transducer was placed in the monitor well and allowed to equilibrate. The proper operating parameters such as time, date, test number, sample rate, number of inputs, data type, and scale factor and offset values of the transducer were inserted to properly program the data logger for the slug test. The decontaminated slug was rapidly lowered into the monitor well in such a manner as to minimize turbulence and splashing. The injection of the slug created a nearly instantaneous rise in the

water level or hydraulic head as well as some transient oscillations (minimized by the smooth slug injection). After the initial rise, the water level of the monitor well dropped as it returned to equilibrium. The water-level altitudes were recorded by the data logger.

After equilibrium was attained, the slug was rapidly and smoothly removed from the monitor well and the subsequent rise of the water level in the monitor well versus the time since the start of the test was also recorded by the data logger.

After the slug test was completed, the data was downloaded onto a computer and printed out by a portable printer.

#### X.3 SLUG TEST DATA ANALYSIS METHOD

The method used for analysis of the slug test data depends on the setting of the monitor well being tested. For monitor wells in unconfined conditions, the Bouwer and Rice (1976) method is the appropriate method to use for reduction of the slug test data to determine values of hydraulic conductivity. The Bouwer and Rice method can also be used for semi-confined and confined conditions (Bouwer, 1989). The static water table intersected below the top of the screen; therefore, the slug test data were obtained from monitor wells that are screened in unconfined conditions.

The data plots and data reduction for the Bouwer and Rice method were accomplished using the AQTESOLV software package Version 2.0 developed by Geraghty & Miller (1994).

The slug test data analyses using Bouwer and Rice (1976) method is presented in this section (Appendix X). The slug test results are presented in Section X.4.

The method described by Bouwer and Rice (1976) is used to calculate the hydraulic conductivity of an aquifer or hydrologic unit in the vicinity of a well screen from the rate of rise or fall of the water level or hydraulic head in the monitor well after a known volume or "slug" is suddenly injected or withdrawn. This particular method is based on the following assumptions: 1) drawdown of the water table around the monitor well is negligible, 2) flow above the water table (in the capillary fringe) can be ignored, 3) head losses as water enters the monitor well (well losses) are negligible, and 4) the aquifer is homogeneous and isotropic.

The rate of flow of ground water into a monitor well after the water level has been lowered a distance, y, below the static water table around the monitor well is calculated using the Thiem equation (Equation 1).

$$Q = 2\pi KL \frac{y}{\ln(R_e/r_w)}, \text{ where}$$
 (1)

Where,

Q = rate of flow into the well;

 $\pi$  = 3.14159, the ratio of the circumference to the diameter of a circle.

K = hydraulic conductivity of the hydrologic unit in the vicinity of the well screen;

L = length of screened interval;

y = vertical difference between water level inside the well and the static water level outside the well;

R<sub>e</sub> = effective radial distance over which y is dissipated; and

 $r_w$  = radial distance to the undisturbed portion of the hydrologic unit from the centerline of the well.

The value of  $r_w$  is the radius of the screened section of the monitor well plus the thickness of the sand pack and the developed zone around the monitor well. Because the thickness of the developed zone is almost never known, the tendency is to ignore it and take only the thickness of the sand pack into account (Bouwer, 1989).

The rate of rise of the water level (dy/dt) in the well after the water level has been quickly lowered can be regarded as:

$$\frac{dy}{dt} = \frac{-Q}{\pi r_c^2}$$
 (2)

dy/dt = rate of rise of the water level within the well;

Q = volume rate of flow into well;

 $\pi$  = 3.14159, the ratio of the circumference to the diameter of a circle; and

 $r_c$  = radius of the casing.

If the water level rises in the screened section of the well with a sand pack around it, then the thickness and porosity of the sand pack should be taken into account when calculating the equivalent value of  $r_c$  for the rising water level. The equivalent value of  $r_c$  is then calculated using Equation (3) if the water level is within the screened interval of the monitor well.

$$r_c = [(1 - n)r_c^2]^{1/2}$$
, where (3)

n = porosity of the sand pack;

 $r_c$  = radius of the casing;

r<sub>w</sub> = radius distance to the undisturbed portion of the aquifer from the centerline of the well.

By solving Equation (2) for Q, and using it in Equation (1), it is possible to integrate, and solve for hydraulic conductivity, K, in Equation (4).

$$K = r_c^2 \ln \frac{(R_c/r_w)}{2L} \frac{1}{t} \ln \frac{y_o}{y_t}, \text{ where}$$
 (4)

K = Hy aulic conductivity;

 $r_c$  = radius of casing;

R<sub>e</sub> = effective radial distance over which y is dissipated;

r<sub>w</sub> = radial distance to the undisturbed portion of the aquifer from the centerline of the well;

 $y_o = y$  at time zero; and

 $y_t = y$  at time t.

This equation was used to calculate hydraulic conductivity of the fine-grained sandstone/siltstone bedrock.

Values of  $R_e$ , effective radius, for various system geometries are expressed in terms of the dimensionless ratio  $\ln(R_e/r_w)$  and were determined empirically with an electrical resistance network analog for different values of  $r_w$ , L, length of water column in the well,  $\dot{H}$ , and hydrologic unit thickness, b, (Bouwer and Rice, 1976). The data are used in one of two equations: Equation (5) is used when H is less than b, and Equation (6) when H is equal to b. These equations are:

$$\ln \frac{R_e}{r_w} = \left[ \frac{1.1}{\ln(H/r_w)} + \frac{A + B\ln[(b - H)/r_w]}{L/r_w} \right]^{-1}, \text{ and}$$
 (5)

$$\ln \frac{R_e}{r_w} = \left[ \frac{1.1}{\ln (H/r_w)} + \frac{C}{L/r_w} \right]^{-1}, where$$
 (6)

A,B,and C = dimensionless values as a function of  $L/r_w$ ;

R<sub>e</sub> = Effective radial distance over which y is dissipated;

 $r_w$  = Radial distance to the undisturbed portion of the aquifer from the center line of the well;

H = length of water column in the well;

b = hydrologic unit thickness; and

L = length of screened interval.

Because y and t are the only variables in Equation (4), a plot of  $\ln y_t$  versus t semilograrithmic paper may be used to determine  $[\ln(y_o/y_t)]/t$ . The straight line through the data points can also be used to select two values of y, namely  $y_o$  and  $y_t$ , along the time interval t for substitution into Equation (4). Because drawdown of the ground-water table around the well increases exponentially and time increases linearly as the test progresses, the points begin to deviate from the straight line for large t and small y. Thus, only the linear portion of the curve should be used to evaluate  $[\ln(y_o/y_t)]/t$  for the calculation of K using Equation (4) (Bouwer, 1989).

#### X.4 SLUG TEST RESULTS

The slug test data for the falling-head (injection of the slug) and the rising-head (withdrawal of the slug) tests are presented in this section. Only the data from the rising-head tests were analyzed by the Bouwer and Rice method to calculate the hydraulic conductivity because the monitor wells were screened in unconfined conditions. The falling-head test performed on an unconfined aquifer produces erroneous results due to the drainage of water into the unsaturated zone above the water table. Thus, the falling-head tests are invalid in monitor wells screened in unconfined conditions. The graphs illustrating the plotted displacement values versus time for the rising-head tests are presented in this section. The well construction data used for the

slug test analysis are presented in Table X.1. The computed hydraulic conductivity values for the monitor wells at IRP Site No. 6, No. 7, and No. 8 are presented in Table X.2.

The saturated thickness of the hydrologic unit was assumed to be equal to the saturated thickness of the screened interval (as well as the height of the water in the monitor well); although, the observed saturated thickness of the hydrologic unit observed during drilling (air rotary) was approximately four to five feet. The depth to water encountered during drilling was approximately equal to the depth to the static water table. Ground water encountered during drilling the boreholes for the monitor wells may possibly be migrating through small fractures and/or intergranular spaces within the fine-grained sandstone/siltstone unit. The hydraulic conductivity (K) ratio (vertical K/horizonal K) was assumed to be equal to 0.1.

The average hydraulic conductivity values at IRP Site No. 6, No. 7, and No. 8 are 2.38 X 10<sup>-2</sup> feet per minute (ft/min) (256 gallons per day per square feet (gpd/ft<sup>2</sup>)), 2.44 X 10<sup>-2</sup> ft/min (264 gpd/ft<sup>2</sup>), and 9.86 X 10<sup>-3</sup> ft/min (107 gpd/ft<sup>2</sup>), respectively.

Table X.2
Slug Test Results, IRP Sites No. 6, No. 7, and No. 8
120th Fighter Wing, Montana ANGB, Great Falls, Montana

Monitor Well	Hydraulic Conductivity (ft/min)	Hydraulie Conductivity (gpd/ff²)
	IRP Site No. 6	
6-MW2	2.89 x 10 <sup>-2</sup>	311
6-MW3	1.87 x 10 <sup>-2</sup>	201
	IRP Site No. 7	
7-MW2	4.27 x 10 <sup>-2</sup>	460
7-MW3	1.03 x 10 <sup>-2</sup>	111
7-MW5	2.04 x 10 <sup>-2</sup>	220
	IRP Site No. 8	
8-MW2	1.01 x 10 <sup>-2</sup>	109
8-MW4	9.62 x 10 <sup>-3</sup>	104

ft/min - feet per minute

gpd/ft<sup>2</sup> - gallons per day per square feet

#### X.4 REFERENCES

Bouwer, H. and Rice, R.C., 1976. A Slug Test for Determining Hydraulic Conductivity of Unconfines Aquifers with Completely or Partially Pentrating Wells. American Geophysical Union Water Resources Research, Vol. 12, No. 3, p. 423-428.

Bouwer, H., 1989. The Bouwer and Rice Slug Test - An Update. Ground Water, Vol. 27, No. 3, p. 304-309.

Geraghty & Miller, Inc., 1991. AQTESOLV software package, Version 1.1, Geraghty & Miller, Inc., Reston, VA.

company: Operational Technologies Corp. CLIENT: HAZWRAP **РРОЈЕСТ: 8056-101** LOCATION: Montana ANGB Rising Head Test for 6-MW2 DATA SET: 6MW2R.DAT 06/21/96 AQUIFER MODEL: Unconf ined SOLUTION METHOD: Bouwer-Rice TEST DATA: H0= 1.16 ft Displacement (ft) r<sub>c</sub>= 0.0833 ft r<sub>w</sub>= 0.25 ft L = 20. ft b = 20. ft1. H = 5.81 ftPARAMETER ESTIMATES: K = 0.008531 ft/miny0 = 1.002 ft0.1 0.5 Time (min)

CLIENT: HAZWRAP company: Operational Technologies Corp. LOCATION: Montana ANGB **РВОЈЕСТ: 8056-101** Rising Head Test for 6-MW2 DATA SET: 6MW2R.DAT 06/21/96 AQUIFER MODEL: Unconfined SOLUTION METHOD: Bouwer-Rice TEST DATA: Displacement (ft) H0= 1.16 ft r<sub>c</sub>= 0.0833 ft r<sub>ω</sub>= 0.25 ft L = 20. ft b = 20. ftH = 5.81 ftPARAMETER ESTIMATES: K = 0.008399 ft/miny0 = 1.016 ft0.5 1.5 Time (min)

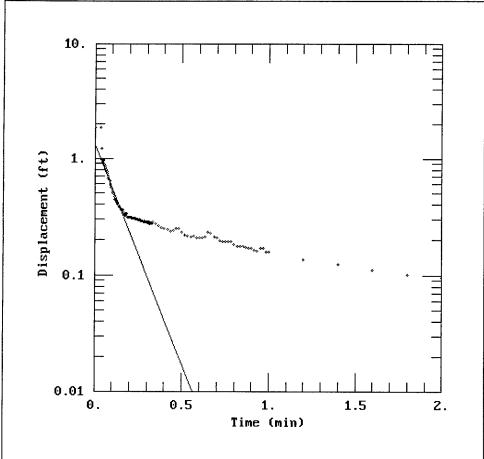
company: Operational Technologies Corp. CLIENT: HAZURAP **РРОЈЕСТ: 8056-101** LOCATION: Montana ANGB Rising Head Test for 6-MW3 DATA SET: 6MW3R.DAT 06/21/96 AQUIFER MODEL: Unconfined SOLUTION METHOD: Bouwer-Rice TEST DATA: H0= 0.922 ft Displacement (ft) r<sub>c</sub>= 0.0833 ft r<sub>w</sub>= 0.25 ft L = 20. ft b = 20. ft1. H = 7.82 ftPARAMETER ESTIMATES: K = 0.007131 ft/miny0 = 1.093 ft0.1 2. 1.5 0.5 Time (min) AQTESOLV CLIENT: HAZURAP

LOCATION: Montana ANGB

COMPANY: Operational Technologies Corp.

PROJECT: 8056-101

#### Rising Head Test for 7-MW2



DATA SET: 7MW2R.DAT 06/21/96

AQUIFER MODEL: Unconfined SOLUTION METHOD: Bouwer-Rice

TEST DATA: H0 = 1.87 ft  $r_c = 0.0833 \text{ ft}$   $r_w = 0.25 \text{ ft}$  L = 20. ft b = 20. ftH = 7.68 ft

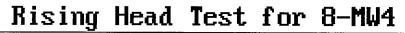
PARAMETER ESTIMATES: K = 0.01576 ft/min y0 = 1.311 ft

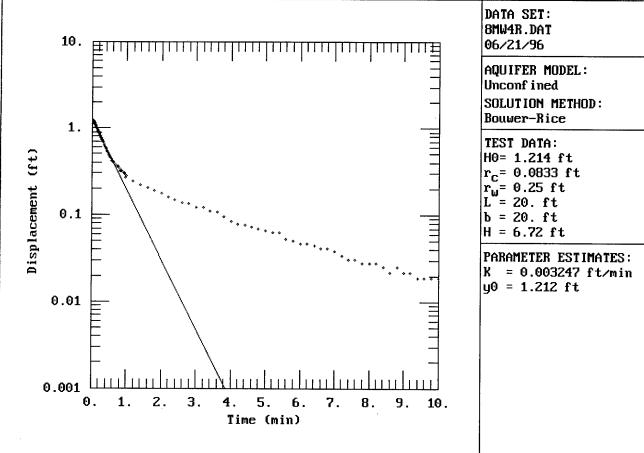
company: Operational Technologies Corp. CLIENT: HAZWRAP **РВОЈЕСТ: 8056-101** LOCATION: Montana ANGB Rising Head Test for 7-MW3 DATA SET: 7MW3R.DAT 06/21/96 AQUIFER MODEL: Unconfined SOLUTION METHOD: Bouwer-Rice TEST DATA: H0= 1.924 ft Displacement (ft) r<sub>c</sub>= 0.0833 ft r<sub>w</sub>= 0.25 ft L<sup>w</sup>= 20. ft b = 20. ft0.1 H = 14.88 ftPARAMETER ESTIMATES: K = 0.007493 ft/miny0 = 2.158 ft0.01 0.001 3. 2.25 1.5 0.75 Time (min)

CLIENT: HAZWRAP company: Operational Technologies Corp. LOCATION: Montana ANGB **РРОЈЕСТ: 8056-101** Rising Head Test for 7-MW5 DATA SET: 7MW5R.DAT 06/21/96 AQUIFER MODEL: Unconf ined SOLUTION METHOD: Bouwer-Rice TEST DATA: Displacement (ft) 1. H0= 1.176 ft  $r_{c}$ = 0.0833 ft  $r_{\omega} = 0.25 \text{ ft}$ L = 20. ft b = 20. ftH = 8.66 ftPARAMETER ESTIMATES: 0.1 K = 0.006508 ft/miny0 = 1.108 ft 2. 5. 7. Time (min)

company: Operational Technologies Corp. CLIENT: HAZWRAP **РВОЈЕСТ: 8056-101** LOCATION: Montana ANGB Rising Head Test for 8-MW2 DATA SET: 8MWZR.DAT 06/21/96 AQUIFER MODEL: Unconf ined SOLUTION METHOD: Bouwer-Rice TEST DATA: H0= 1.11 ft Displacement (ft) 1. r<sub>c</sub>= 0.0833 ft r<sub>w</sub>= 0.25 ft L = 20. ft b = 20. ftH = 9.1 ftPARAMETER ESTIMATES: K = 0.004925 ft/min0.1 y0 = 0.9218 ft0.01 2. Time (min) AQTESOLV CLIENT: HAZURAP company: Operational Technologies Corp.

LOCATION: Montana ANGB project: 8056-101





AQTESOLV

## Rising Head Test for Monitor Well 6-MW2

		0.0866	0.637	0.2566	0.462
		0.0900	0.624	0.2600	0.462
		0.0933	0.618	0.2633	0.462
SE1000C	,	0.0966	0.602	0.2666	0.456
Environment		0.1000	0.596	0.2700	0.459
05/17 17:1		0.1033	0.586	0.2733	0.466
00, 11 11.1		0.1066	0.583	0.2766	0.459
Unit# 00831	Test 11	0.1100	0.583	0.2800	0.459
O1111# 00001	103(1)	0.1133	0.573	0.2833	0.459
Setups: IN	PUT 1	0.1166	0.564	0.2866	0.453
Setups. IIV		0.1200	0.561	0.2900	0.456
Type Lev	vel (F)	0.1233	0.551	0.2933	0.459
• •	OC	0.1266	0.542	0.2966	0.453
I.D.	6022	0.1300	0.538	0.3000	0.456
١.٠.	0022	0.1333	0.538	0.3033	0.453
Deference	0.000	0.1366	0.532	0.3066	0.450
Reference	0.000	0.1400	0.532	0.3100	0.459
•	10.030	0.1433	0.516	0.3133	0.447
	.040	0.1466	0.513	0.3166	0.450
	50.000	0.1500	0.519	0.3200	0.456
Delay mSEC	50.000	0.1533	0.510	0.3233	0.453
Ct 0 0E/47	12.20.15	0.1566	0.513	0.3266	0.450
Step 0 05/17	13.20.15	0.1600	0.500	0.3300	0.447
Elected Time	INDUT 4	0.1633	0.497	0.3333	0.447
Elapsed Time	INPUT	0.1666	0.507	0.3500	0.447
0.0000	0.047	0.1700	0.488	0.3666	0.443
	0.317	0.1700	0.500	0.3833	0.440
	1.306		0.488	0.4000	0.447
	0.957	0.1766	0.488	0.4166	0.440
	1.163	0.1800	0.494	0.4333	0.437
	1.011	0.1833		0.4500	0.434
	1.030	0.1866	0.481	0.4666	0.431
	1.001	0.1900	0.488	0.4833	0.431
	0.944	0.1933	0.478	0.4033	0.440
	0.963	0.1966	0.488	0.5000	0.440
	0.894	0.2000	0.478	0.5333	0.431
	0.919	0.2033	0.485	0.5500	0.428
-	0.846	0.2066	0.478		
	0.862	0.2100	0.475	0.5666	0.431 0.431
	0.824	0.2133	0.478	0.5833	0.431
	0.817	0.2166	0.475	0.6000	
	0.767	0.2200	0.469	0.6166	0.421
	0.779	0.2233	0.475	0.6333	0.431
	0.754	0.2266	0.469	0.6500	0.424
	0.741	0.2300	0.469	0.6666	0.415
	0.716	0.2333	0.475	0.6833	0.418
	0.703	0.2366	0.466	0.7000	0.415
	0.691	0.2400	0.466	0.7166	0.418
	0.684	0.2433	0.466	0.7333	0.421
0.0766	0.672	0.2466	0.469	0.7500	0.415
0.0800	0.656	0.2500	0.462	0.7666	0.412
0.0833	0.643	0.2533	0.466	0.7833	0.415

0.8000	0.412	9.2000	0.348	59.0000	0.234
0.8166	0.412	9.4000	0.348	60.0000	0.234
0.8333	0.415	9.6000	0.348	61.0000	0.234
0.8500	0.412	9.8000	0.345	62.0000	0.231
0.8666	0.415	10.0000	0.345	63.0000	0.225
0.8833	0.412	11.0000	0.342		
0.9000	0.412	12.0000	0.345		
0.9166	0.409	13.0000	0.339		
0.9333	0.409	14.0000	0.339		
0.9500	0.409	15.0000	0.332		
0.9666	0.409	16.0000	0.332		
0.9833	0.409	17.0000	0.323		
1.0000	0.409	18.0000	0.323		
1.2000	0.399	19.0000	0.320		
1.4000	0.396	20.0000	0.313		
1.6000	0.393	21.0000	0.310		
1.8000	0.393	22.0000	0.304		
2.0000	0.386	23.0000	0.307		
2.2000	0.389	24.0000	0.304		
2.4000	0.386	25.0000	0.301		
2.6000	0.383	26.0000	0.301		
2.8000	0.383	27.0000	0.298		
3.0000	0.383	28.0000	0.291		
3.2000	0.380	29.0000	0.291		
3.4000	0.377	30.0000	0.285		
3.6000	0.380	31.0000	0.285		
3.8000	0.377	32.0000	0.282		
4.0000	0.377	33.0000	0.279		
4.2000	0.374	34.0000	0.279		
4.4000	0.374	35.0000	0.275		
4.6000	0.374	36.0000	0.275		
4.8000	0.370	37.0000	0.269		
5.0000	0.370	38.0000	0.269		
5.2000	0.367	39.0000	0.259		
5.4000	0.367	40.0000	0.266		
5.6000	0.364	41.0000	0.263		
5.8000	0.367	42.0000	0.263		
6.0000	0.361	43.0000	0.259		
6.2000	0.361	44.0000	0.259		
6.4000	0.361	45.0000	0.259		
6.6000	0.364	46.0000	0.253		
6.8000	0.364	47.0000	0.253		
7.0000	0.361	48.0000	0.253		
7.2000	0.358	49.0000	0.250		
7.4000	0.358	50.0000	0.247		
7.6000	0.355	51.0000	0.250		
7.8000	0.355	52.0000	0.244		
8.0000	0.351	53.0000	0.244		
8.2000	0.351	54.0000	0.244		
8.4000	0.351	55.0000	0.244		
8.6000	0.355	56.0000	0.240		
8.8000	0.348	57.0000	0.237		
9.0000	0.345	58.0000	0.237		

## Falling Head Test for Monitor Well 6-MW2

	0.0933	-0.421	0.2633	-0.377
SE1000C	0.0966	-0.402	0.2666	-0.377
Environmental Logger	0.1000	-0.389	0.2700	-0.377
05/17 17:14	0.1033	-0.399	0.2733	-0.377
	0.1066	-0.367	0.2766	-0.377
Unit# 00831 Test 10	0.1100	-0.367	0.2800	-0.377
	0.1133	-0.389	0.2833	-0.377
Setups: INPUT 1	0.1166	-0.393	0.2866	-0.377
	0.1200	-0.380	0.2900	-0.377
Type Level (F)	0.1233	-0.380	0.2933	-0.377
Mode TOC	0.1266	-0.383	0.2966	-0.377
I.D. 6021	0.1300	-0.377	0.3000	-0.374
	0.1333	-0.386	0.3033	-0.377
Reference 0.000	0.1366	-0.380	0.3066	-0.377
Linearity 0.030	0.1400	-0.383	0.3100	-0.377
Scale factor 10.030	0.1433	-0.386	0.3133	-0.377
Offset 0.040	0.1466	-0.380	0.3166	-0.377
Delay mSEC 50.000	0.1500	-0.380	0.3200	-0.377
Boldy Money	0.1533	-0.380	0.3233	-0.377
Step 0 05/17 11:46:02	0.1566	-0.380	0.3266	-0.374
Step 6 00/17 71.40.02	0.1600	-0.380	0.3300	-0.377
Elapsed Time INPUT 1	0.1633	-0.380	0.3333	-0.377
	0.1666	-0.380	0.3500	-0.374
0.0000 0.003	0.1700	-0.380	0.3666	-0.374
0.0033 0.000	0.1733	-0.380	0.3833	-0.374
0.0066 0.003	0.1766	-0.380	0.4000	-0.374
0.0100 0.003	0.1800	-0.380	0.4166	-0.374
0.0133 0.000	0.1833	-0.377	0.4333	-0.374
0.0166 0.000	0.1866	-0.380	0.4500	-0.370
0.0200 0.006	0.1900	-0.380	0.4666	-0.370
0.0233 0.000	0.1933	-0.380	0.4833	-0.370
0.0266 -0.047	0.1966	-0.380	0.5000	-0.370
0.0300 -0.351	0.2000	-0.380	0.5166	-0.370
0.0333 -0.348	0.2033	-0.377	0.5333	-0.370
0.0366 -0.380	0.2066	-0.380	0.5500	-0.370
0.0400 -0.554	0.2100	-0.377	0.5666	-0.370
0.0433 -0.545	0.2133	-0.380	0.5833	-0.370
0.0466 -0.805	0.2166	-0.377	0.6000	-0.367
0.0500 -0.447	0.2200	-0.380	0.6166	-0.370
0.0533 -0.301	0.2233	-0.377	0.6333	-0.367
0.0566 -0.386	0.2266	-0.377	0.6500	-0.358
0.0600 -0.339	0.2300	-0.380	0.6666	-0.374
0.0633 -0.361	0.2333	-0.377	0.6833	-0.367
0.0666 -0.447	0.2366	-0.380	0.7000	-0.367
0.0700 -0.440	0.2400	-0.377	0.7166	-0.374
	0.2433	-0.377	0.7333	-0.364
0.0733 -0.481 0.0766 -0.415	0.2466	-0.377	0.7500	-0.367
0.0766 -0.415	0.2500	-0.380	0.7666	-0.367
	0.2533	-0.377	0.7833	-0.367
	0.2566	-0.377	0.8000	-0.367
0.0866 -0.307	0.2600	-0.377	0.8166	-0.367
0.0900 -0.377	0.2000	-0.377	3.0100	3.507

0.8333	-0.367	9.2000	-0.301	57.0000	-0.215
0.8500	-0.367	9.4000	-0.301	58.0000	-0.215
0.8666	-0.367	9.6000	-0.301	59.0000	-0.212
0.8833	-0.367	9.8000	-0.298	60.0000	-0.215
0.9000	-0.367	10.0000	-0.298	61.0000	-0.212
0.9166	-0.364	11.0000	-0.291	62.0000	-0.212
0.9333	-0.364	12.0000	-0.282	63.0000	-0.212
0.9500	-0.364	13.0000	-0.279	64.0000	-0.215
0.9666	-0.364	14.0000	-0.275	65.0000	-0.212
0.9833	-0.364	15.0000	-0.275	66.0000	-0.212
1.0000	-0.364	16.0000	-0.269	67.0000	-0.212
1.2000	-0.361	17.0000	-0.266	68.0000	-0.212
1.4000	-0.358	18.0000	-0.263	69.0000	-0.209
1.6000	-0.355	19.0000	-0.259	70.0000	-0.212
1.8000	-0.355	20.0000	-0.256	71.0000	-0.209
2.0000	-0.351	21.0000	-0.256	72.0000	-0.209
2.2000	-0.348	22.0000	-0.253	73.0000	-0.209
2.4000	-0.348	23.0000	-0.253	74.0000	-0.209
2.6000	-0.345	24.0000	-0.250	75.0000	-0.209
2.8000	-0.342	25.0000	-0.253	76.0000	-0.209
3.0000	-0.342	26.0000	-0.247	77.0000	-0.209
3.2000	-0.342	27.0000	-0.244	78.0000	-0.209
3.4000	-0.339	28.0000	-0.240	79.0000	-0.209
3.6000	-0.336	29.0000	-0.240	80.0000	-0.206
3.8000	-0.336	30.0000	-0.240	81.0000	-0.206
4.0000	-0.332	31.0000	-0.237	82.0000	-0.209
4.2000	-0.332	32.0000	-0.237	83.0000	-0.209
4.4000	-0.329	33.0000	-0.237	84.0000	-0.209
4.6000	-0.326	34.0000	-0.237	85.0000	-0.209
4.8000	-0.326	35.0000	-0.234	86.0000	-0.209
5.0000	-0.326	36.0000	-0.234	87.0000	
5.2000	-0.323	37.0000	-0.234	88.0000	-0.209 -0.212
5.4000	-0.323	38.0000	-0.231	89.0000	-0.212 -0.209
5.6000	-0.320	39.0000	-0.228	90.0000	
5.8000	-0.320	40.0000	-0.228	91.0000	-0.212 0.215
6.0000	-0.320	41.0000	-0.225	91.0000	-0.215
6.2000	-0.317	42.0000	-0.225		
6.4000	-0.317	43.0000	-0.225		
6.6000	-0.313	44.0000	-0.225		
6.8000	-0.313	45.0000	-0.223		
7.0000	-0.313	46.0000	-0.221		
7.2000	-0.310	47.0000	-0.218		
7.4000	-0.310 -0.310	48.0000	-0.216		
7.6000	-0.307	49.0000			
7.8000	-0.307 -0.307	50.0000 50.0000	-0.225 -0.218		
8.0000	-0.307 -0.307	51.0000	-0.218 -0.218		
8.2000	-0.307 -0.307	52.0000	-0.216 -0.215		
8.4000	-0.307 -0.304	53.0000	-0.215 -0.215		
8.6000	-0.304 -0.304	54.0000	-0.215 -0.218		
8.8000	-0.304 -0.304	55.0000 55.0000			
9.0000	-0.304 -0.304	56.0000	-0.215 -0.218		
9.0000	-0.304	00000	-0.218		

## Falling Head Test for Monitor Well 6-MW3

	0.0866	-0.396	0.2566	-0.358
	0.0900	-0.228	0.2600	-0.358
	0.0933	-0.187	0.2633	-0.358
SE1000C	0.0966	-0.421	0.2666	-0.358
Environmental Logger	0.1000	-0.612	0.2700	-0.358
05/17 16:54	0.1033	-0.475	0.2733	-0.358
•••••	0.1066	-0.314	0.2766	-0.358
Unit# 00831 Test 4	0.1100	-0.279	0.2800	-0.358
	0.1133	-0.164	0.2833	-0.358
Setups: INPUT 1	0.1166	-0.301	0.2866	-0.358
	0.1200	-0.516	0.2900	-0.358
Type Level (F)	0.1233	-0.475	0.2933	-0.358
Mode TOC	0.1266	-0.361	0.2966	-0.358
I.D. 06031	0.1300	-0.314	0.3000	-0.358
1.5.	0.1333	-0.288	0.3033	-0.361
Reference 0.000	0.1366	-0.345	0.3066	-0.358
Linearity 0.030	0.1400	-0.421	0.3100	-0.358
Scale factor 10.030	0.1433	-0.405	0.3133	-0.358
Offset 0.040	0.1466	-0.364	0.3166	-0.358
Delay mSEC 50.000	0.1500	-0.333	0.3200	-0.358
Delay IIISEC 30.000	0.1533	-0.336	0.3233	-0.358
Step 0 05/16 16:18:26	0.1566	-0.364	0.3266	-0.358
Step 0 03/10 10:10:20	0.1600	-0.386	0.3300	-0.358
Elapsed Time INPUT 1	0.1633	-0.374	0.3333	-0.358
Elapsed Time IN 61	0.1666	-0.358	0.3500	-0.358
0.0000 -0.199	0.1700	-0.348	0.3666	-0.358
0.0000 -0.199	0.1733	-0.355	0.3833	-0.358
0.0066 -0.177	0.1766	-0.367	0.4000	-0.358
0.0100 -0.390	0.1800	-0.367	0.4166	-0.358
0.0100 -0.390	0.1833	-0.364	0.4333	-0.358
0.0166 -0.951	0.1866	-0.358	0.4500	-0.358
0.0200 -0.516	0.1900	-0.358	0.4666	-0.358
	0.1933	-0.358	0.4833	-0.358
	0.1966	-0.364	0.5000	-0.358
	0.2000	-0.361	0.5166	-0.358
0.0300 -0.780 0.0333 -0.726	0.2033	-0.358	0.5333	-0.358
0.0366 -0.815	0.2066	-0.358	0.5500	-0.358
0.0400 -0.869	0.2100	-0.358	0.5666	-0.358
0.0433 -0.634	0.2133	-0.361	0.5833	-0.358
0.0466 -0.355	0.2166	-0.361	0.6000	-0.358
0.0500 -0.402	0.2200	-0.358	0.6166	-0.358
	0.2233	-0.358	0.6333	-0.358
	0.2266	-0.358	0.6500	-0.358
0.0566 -0.504 0.0600 -0.770	0.2300	-0.361	0.6666	-0.358
0.0600 -0.770	0.2333	-0.358	0.6833	-0.358
	0.2366	-0.361	0.7000	-0.358
0.0666 -0.250 0.0700 -0.516	0.2300	-0.358	0.7166	-0.358
	0.2433	-0.358	0.7333	-0.358
0.0733 -0.377	0.2466	-0.358	0.7500	-0.358
0.0766 -0.307	0.2500	-0.361	0.7666	-0.355
0.0800 -0.453	0.2533	-0.358	0.7833	-0.355
0.0833 -0.494	0.2333	-0.000	0., 000	

0.8000	-0.355	9.2000	-0.336
0.8166	-0.355	9.4000	-0.336
0.8333	-0.355	9.6000	-0.336
0.8500	-0.358	9.8000	-0.336
0.8666	-0.355	10.0000	-0.336
0.8833	-0.345	11.0000	-0.336
0.9000	-0.466	12.0000	-0.329
0.9166	-0.380	13.0000	-0.329
0.9333	-0.380	14.0000	-0.329
0.9500	-0.364	15.0000	-0.329
0.9666	-0.358	16.0000	-0.326
0.9833	-0.355	17.0000	-0.326
1.0000	-0.364	18.0000	-0.326
1.2000	-0.355	19.0000	-0.326
1.4000	-0.352	20.0000	-0.326
1.6000	-0.352	21.0000	-0.326
1.8000	-0.352	22.0000	-0.329
2.0000	-0.352	23.0000	-0.323
2.2000	-0.348	24.0000	-0.323
2.4000	-0.348	25.0000	-0.323
2.6000	-0.348	26.0000	-0.323
2.8000	-0.345	27.0000	-0.323
3.0000	-0.348	28.0000	-0.323
3.2000	-0.345	29.0000	-0.323
3.4000	-0.345	30.0000	-0.323
3.6000	-0.345	31.0000	-0.323
3.8000	-0.345	32.0000	-0.323
4.0000	-0.345	33.0000	-0.320
4.2000	-0.342	34.0000	-0.323
4.4000	-0.342	35.0000	-0.323
4.6000	-0.342	36.0000	-0.320
4.8000	-0.342	37.0000	-0.320
5.0000 5.2000	-0.342 -0.342	38.0000	-0.323
5.4000	-0.342 -0.342	39.0000	-0.320 -0.320
5.6000	-0.342 -0.339	40.0000 41.0000	
5.8000	-0.339	10.000	-0.320
6.0000	-0.339	42.0000 43.0000	-0.320 -0.320
6.2000	-0.339	44.0000	-0.320
6.4000	-0.339	45.0000	-0.323
6.6000	-0.339	<del>4</del> 0.0000 .	-0.020
6.8000	-0.339		
7.0000	-0.339		
7.2000	-0.339		
7.4000	-0.336		
7.6000	-0.339		
7.8000	-0.339		
8.0000	-0.336		
8.2000	-0.336		
8.4000	-0.336		
8.6000	-0.336		
8.8000	-0.336		
9.0000	-0.336		

## Rising Head Test for Monitor Well 6-MW3

		0.0833	0.840	0.2433	0.485
SE10000		0.0866	0.761	0.2466	0.482
Environment		0.0900	0.802	0.2500	0.472
05/17 16:5		0.0933	0.827	0.2533	0.475
00, 11		0.0966	0.773	0.2566	0.472
Unit# 00831	Test 5	0.1000	0.729	0.2600	0.478
O		0.1033	0.745	0.2633	0.469
Setups: IN	IPUT 1	0.1066	0.764	0.2666	0.459
		0.1100	0.719	0.2700	0.463
Type Le	vel (F)	0.1133	0.688	0.2733	0.469
• •	OC	0.1166	0.710	0.2766	0.475
I.D. 060		0.1200	0.707	0.2800	0.456
	-	0.1233	0.669	0.2833	0.456
Reference	0.000	0.1266	0.653	0.2866	0.463
	0.030	0.1300	0.665	0.2900	0.463
Scale factor	10.030	0.1333	0.659	0.2933	0.456
	0.040	0.1366	0.627	0.2966	0.450
Delay mSEC	50.000	0.1400	0.621	0.3000	0.453
Boldy money	•••••	0.1433	0.627	0.3033	0.459
Step 0 05/16	17:05:21	0.1466	0.631	0.3066	0.456
Otop 0 00/10	17.55.21	0.1500	0.602	0.3100	0.453
Elapsed Time	INPUT 1	0.1533	0.586	0.3133	0.447
_ rapsou rano		0.1566	0.593	0.3166	0.447
0.0000	0.294	0.1600	0.593	0.3200	0.450
	0.025	0.1633	0.577	0.3233	0.450
	-0.082	0.1666	0.555	0.3266	0.440
	0.345	0.1700	0.567	0.3300	0.443
	0.919	0.1733	0.567	0.3333	0.447
	1.109	0.1766	0.545	0.3500	0.440
	0.691	0.1800	0.535	0.3666	0.443
	0.107	0.1833	0.548	0.3833	0.428
0.0266	1.087	0.1866	0.542	0.4000	0.424
0.0300	1.724	0.1900	0.526	0.4166	0.428
0.0333	1.059	0.1933	0.523	0.4333	0.428
0.0366	0.665	0.1966	0.526	0.4500	0.415
0.0400	1.236	0.2000	0.523	0.4666	0.421
0.0433	1.338	0.2033	0.513	0.4833	0.418
0.0466	0.837	0.2066	0.510	0.5000	0.415
0.0500	0.830	0.2100	0.510	0.5166	0.409
0.0533	1.170	0.2133	0.510	0.5333	0.409
0.0566	1.068	0.2166	0.501	0.5500	0.405
0.0600	0.795	0.2200	0.494	0.5666	0.405
0.0633	0.881	0.2233	0.494	0.5833	0.402
0.0666	1.033	0.2266	0.494	0.6000	0.402
0.0000	0.916	0.2300	0.491	0.6166	0.399
0.0733	0.783	0.2333	0.485	0.6333	0.399
0.0733	0.843	0.2366	0.482	0.6500	0.396
0.0766	0.922	0.2400	0.485	0.6666	0.396
0.0000	U.322	0.2700	5,700	2.2200	

				•
0.6833	0.396	7.4000	0.310	48.0000
0.7000	0.396	7.6000	0.307	49.0000
0.7166	0.393	7.8000	0.307	50.0000
0.7333	0.393	8.0000	0.307	51.0000
0.7500	0.390	8.2000	0.307	52.0000
0.7666	0.390	8.4000	0.304	53.0000
0.7833	0.390	8.6000	0.304	54.0000
0.8000	0.386	8.8000	0.301	55.0000
0.8166	0.386	9.0000	0.301	56.0000
0.8333	0.386	9.2000	0.298	57.0000
0.8500	0.386	9.4000	0.298	
0.8666	0.383	9.6000	0.294	
0.8833	0.383	9.8000	0.294	
0.9000	0.383	10.0000	0.294	
0.9166	0.383	11.0000	0.291	
0.9333	0.380	12.0000	0.288	
0.9500	0.380	13.0000	0.282	
0.9666	0.380	14.0000	0.279	
0.9833	0.380	15.0000	0.272	
1.0000	0.380	16.0000	0.266	
1.2000	0.371	17.0000	0.266	
1.4000	0.367	18.0000	0.260	
1.6000	0.361	19.0000	0.256	
1.8000	0.355	20.0000	0.253	
2.0000	0.351	21.0000	0.233	
2.2000	0.348	22.0000	0.247	
2.4000	0.348	23.0000	0.244	
2.6000	0.345	24.0000	0.237	
2.8000	0.342	25.0000	0.234	
3.0000	0.342	26.0000	0.228	
3.2000	0.339	27.0000	0.225	
3.4000	0.339	28.0000	0.218	
3.6000	0.336	29.0000	0.218	
3.8000	0.336	30.0000	0.218	
4.0000	0.332	31.0000	0.215	
4.2000	0.332	32.0000	0.212	
4.4000	0.329	33.0000	0.209	
4.6000	0.329	34.0000	0.202	
4.8000	0.326	35.0000	0.202	
5.0000	0.326	36.0000	0.202	
5.2000	0.323	37.0000	0.199	
5.4000	0.323	38.0000	0.196	
5.6000	0.320	39.0000	0.193	
5.8000	0.320	40.0000	0.193	
6.0000	0.320	41.0000	0.190	
6.2000	0.317	42.0000	0.187	
6.4000	0.317	43.0000	0.187	
6.6000	0.313	44.0000	0.183	
6.8000	0.313	45.0000	0.183	
7.0000	0.310	46.0000	0.180	
7.2000	0.310	47.0000	0.177	

0.177 0.174 0.174 0.171 0.168 0.168 0.168 0.164 0.158

## Falling Head Test for Monitor Well 7-MW2

	0.0833	-0.282	0.2466	-0.218
	0.0866	-0.285	0.2500	-0.218
SE1000C	0.0900	-0.253	0.2533	-0.218
Environmental Logger	0.0933	-0.291	0.2566	-0.218
05/17 16:27	0.0966	-0.269	0.2600	-0.215
	0.1000	-0.294	0.2633	-0.215
Unit# 00831 Test 0	0.1033	-0.247	0.2666	-0.215
	0.1066	-0.282	0.2700	-0.215
Setups: INPUT 1	0.1100	-0.225	0.2733	-0.212
	0.1133	-0.307	0.2766	-0.212
Type Level (F)	0.1166	-0.221	0.2800	-0.212
Mode TOC	0.1200	-0.269	0.2833	-0.212
I.D. 7021	0.1233	-0.253	0.2866	-0.209
	0.1266	-0.272	0.2900	-0.209
Reference 0.000	0.1300	-0.272	0.2933	-0.209
Linearity 0.030	0.1333	-0.275	0.2966	-0.209
Scale factor 10.030	0.1366	-0.282	0.3000	-0.206
Offset 0.040	0.1400	-0.310	0.3033	-0.206
Delay mSEC 50.000	0.1433	-0.218	0.3066	-0.206
20.0,	0.1466	-0.193	0.3100	-0.206
Step 0 05/16 12:32:46	0.1500	-0.199	0.3133	-0.202
G. G. F.	0.1533	-0.320	0.3166	-0.206
Elapsed Time INPUT 1	0.1566	-0.247	0.3200	-0.202
	0.1600	-0.237	0.3233	-0.202
0.0000 -0.431	0.1633	-0.244	0.3266	-0.202
0.0033 -0.326	0.1666	-0.244	0.3300	-0.202
0.0066 -0.183	0.1700	-0.244	0.3333	-0.199
0.0100 -0.339	0.1733	-0.241	0.3500	-0.196
0.0133 -0.551	0.1766	-0.241	0.3666	-0.193
0.0166 -0.478	0.1800	-0.241	0.3833	-0.190
0.0200 -0.593	0.1833	-0.241	0.4000	-0.187
0.0233 -0.678	0.1866	-0.237	0.4166	-0.183
0.0266 -0.329	0.1900	-0.237	0.4333	-0.180
0.0300 -0.193	0.1933	-0.234	0.4500	-0.177
0.0333 -0.488	0.1966	-0.234	0.4666	-0.174
0.0366 -0.564	0.2000	-0.234	0.4833	-0.174
0.0400 -0.367	0.2033	-0.231	0.5000	-0.171
0.0433 -0.028	0.2066	-0.231	0.5166	-0.168
0.0466 -0.082	0.2100	-0.228	0.5333	-0.168
	0.2133	-0.228	0.5500	-0.164
0.0500 -0.383	0.2166	-0.228	0.5666	-0.161
0.0533 -0.383	0.2100	-0.228	0.5833	-0.161
0.0566 -0.228	0.2233	-0.225	0.6000	-0.158
0.0600 -0.263			0.6166	-0.155
0.0633 -0.294	0.2266	-0.225 0.225	0.6333	-0.152
0.0666 -0.294	0.2300	-0.225	0.6500	-0.132
0.0700 -0.323	0.2333	-0.225	0.6666	-0.149
0.0733 -0.279	0.2366	-0.221		-0.145
0.0766 -0.294	0.2400	-0.221	0.6833	
0.0800 -0.288	0.2433	-0.221	0.7000	-0.149

0.7166 0.7333 0.7500 0.7666 0.7833 0.8000 0.8166 0.8333 0.8500 0.8666 0.8833 0.9000 0.9166 0.9333 0.9500 0.9666 0.9833 1.0000	-0.145 -0.142 -0.142 -0.139 -0.136 -0.136 -0.133 -0.130 -0.126 -0.126 -0.123 -0.123 -0.123 -0.123 -0.120 -0.120	7.8000 8.0000 8.2000 8.4000 8.6000 8.8000 9.0000 9.2000 9.4000 9.6000 9.8000 10.0000 11.0000 12.0000 13.0000 14.0000 15.0000	-0.009 -0.009 -0.009 -0.009 -0.009 -0.006 -0.006 -0.006 -0.006 -0.006 -0.003 0.003 0.003
1.2000	-0.120	17.0000	0.000
1.4000	-0.091	18.0000	0.006
1.6000	-0.079	19.0000	0.006
1.8000	-0.072	20.0000	0.000
2.0000	-0.069	21.0000	0.006
2.2000	-0.060		
2.4000 2.6000	-0.057 -0.050		
2.8000	-0.050 -0.050		
3.0000	-0.030		
3.2000	-0.041		
3.4000	-0.038		
3.6000	-0.034		
3.8000	-0.034		
4.0000	-0.031		
4.2000	-0.028		
4.4000	-0.028		
4.6000	-0.025		
4.8000	-0.025		
5.0000 5.2000	-0.022 0.022		
5.4000 5.4000	-0.022 -0.022		
5.6000	-0.022 -0.019		
5.8000	-0.019		
6.0000	-0.015		
6.2000	-0.015		
6.4000	-0.015		
6.6000	-0.015		
6.8000	-0.012		
7.0000	-0.012		
7.2000	-0.012		
7.4000	-0.012		
7.6000	-0.009		

#### Rising Head Test for Monitor Well 7-MW2

	0.0833	0.653	0.2466	0.294
	0.0866	0.631	0.2500	0.298
SE1000C	0.0900	0.596	0.2533	0.294
Environmental Logger	0.0933	0.564	0.2566	0.294
05/17 16:31	0.0966	0.545	0.2600	0.298
	0.1000	0.545	0.2633	0.291
Unit# 00831 Test 1	0.1033	0.516	0.2666	0.291
	0.1066	0.501	0.2700	0.291
Setups: INPUT 1	0.1100	0.494	0.2733	0.288
	0.1133	0.469	0.2766	0.291
Type Level (F)	0.1166	0.443	0.2800	0.285
Mode TOC	0.1200	0.437	0.2833	0.291
I.D. 07022	0.1233	0.428	0.2866	0.285
1.5. 0.022	0.1266	0.415	0.2900	0.285
Reference 0.000	0.1300	0.405	0.2933	0.282
Linearity 0.030	0.1333	0.409	0.2966	0.285
Scale factor 10.030	0.1366	0.396	0.3000	0.279
Offset 0.040	0.1400	0.386	0.3033	0.285
Delay mSEC 50.000	0.1433	0.377	0.3066	0.282
Delay IIISEC 30.000	0.1466	0.371	0.3100	0.282
Step 0 05/16 12:57:16	0.1500	0.367	0.3133	0.275
Step 0 05/10 12.57.10	0.1533	0.358	0.3166	0.279
Flancod Time INDLIT 1	0.1566	0.361	0.3200	0.275
Elapsed Time INPUT 1	0.1600	0.355	0.3233	0.279
0.0000 0.241	0.1633	0.358	0.3266	0.275
0.0000 0.241	0.1666	0.336	0.3300	0.279
0.0033 0.390	0.1700	0.320	0.3333	0.282
0.0066 0.735	0.1700	0.342	0.3500	0.275
0.0100 -0.577		0.329	0.3666	0.263
0.0133 0.120	0.1766	0.329	0.3833	0.253
0.0166 0.593	0.1800	0.332	0.4000	0.233
0.0200 1.499	0.1833	0.317	0.4166	0.244
0.0233 -0.624	0.1866	0.330	0.4333	0.237
0.0266 0.260	0.1900		0.4500	0.241
0.0300 0.459	0.1933	0.313	0.4666	0.250
0.0333 1.074	0.1966	0.313		0.250
0.0366 1.870	0.2000	0.313	0.4833	0.230
0.0400 1.223	0.2033	0.313	0.5000	·
0.0433 0.913	0.2066	0.310	0.5166	0.218
0.0466 0.976	0.2100	0.313	0.5333	0.215
0.0500 0.979	0.2133	0.307	0.5500	0.212
0.0533 0.954	0.2166	0.307	0.5666	0.215
0.0566 0.887	0.2200	0.307	0.5833	0.206
0.0600 0.862	0.2233	0.304	0.6000	0.206
0.0633 0.821	0.2266	0.307	0.6166	0.206
0.0666 0.795	0.2300	0.301	0.6333	0.212
0.0700 0.761	0.2333	0.304	0.6500	0.231
0.0733 0.732	0.2366	0.301	0.6666	0.228
0.0766 0.703	0.2400	0.298	0.6833	0.212
0.0800 0.678	0.2433	0.301	0.7000	0.206

0.7166 0.7333 0.7500 0.7666 0.7833 0.8000 0.8166 0.8333 0.8500 0.8666 0.8833 0.9000 0.9166 0.9333 0.9500 0.9666 0.9833 1.0000 1.2000 1.4000 1.6000 1.8000 2.2000 2.4000 2.2000 2.4000 2.2000 2.4000 2.6000 2.8000 3.6000 3.6000 3.6000 3.6000 3.6000 5.0000 5.0000 5.0000 5.0000 5.0000 6.0000 6.0000 6.0000	0.196 0.193 0.193 0.193 0.193 0.193 0.193 0.183 0.177 0.177 0.174 0.171 0.168 0.168 0.168 0.168 0.168 0.158 0.158 0.158 0.158 0.158 0.158 0.158 0.100 0.060 0.072 0.069 0.066 0.063 0.060 0.060 0.057 0.057 0.057 0.057 0.057 0.053 0.050 0.047 0.047 0.047 0.047 0.044 0.044 0.044 0.044	7.8000 8.0000 8.2000 8.4000 8.6000 9.0000 9.2000 9.4000 9.6000 9.8000 10.0000 11.0000 12.0000 13.0000 14.0000 15.0000 16.0000 17.0000 18.0000 20.0000 21.0000 22.0000
6.2000 6.4000	0.044 0.044	
7.6000	0.041	

0.038 0.038 0.038 0.038 0.038 0.038 0.034 0.034 0.034 0.034 0.034 0.034 0.034 0.038 0.031 0.034 0.034 0.034 0.028 0.031 0.031 0.031 0.031 0.025

#### Falling Head Test for Monitor Well 7-MW3

	0.0833	-0.543	0.2466	-0.533
	0.0866	-0.629	0.2500	-0.533
SE1000C	0.0900	-0.645	0.2533	-0.533
Environmental Logger	0.0933	-0.606	0.2566	-0.533
05/17 17:22	0.0966	-0.527	0.2600	-0.530
	0.1000	-0.499	0.2633	-0.530
Unit# 00831 Test 12	0.1033	-0.530	0.2666	-0.527
	0.1066	-0.613	0.2700	-0.527
Setups: INPUT 1	0.1100	-0.626	0.2733	-0.527
,	0.1133	-0.584	0.2766	-0.527
Type Level (F)	0.1166	-0.537	0.2800	-0.524
Mode TOC	0.1200	-0.530	0.2833	-0.524
I.D. 07031	0.1233	-0.559	0.2866	-0.524
	0.1266	-0.568	0.2900	-0.524
Reference 0.000	0.1300	-0.562	0.2933	-0.524
Linearity 0.030	0.1333	-0.556	0.2966	-0.521
Scale factor 10.030	0.1366	-0.559	0.3000	-0.521
Offset 0.040	0.1400	-0.559	0.3033	-0.521
Delay mSEC 50.000	0.1433	-0.552	0.3066	-0.518
Boldy Mode Go. God	0.1466	-0.556	0.3100	-0.518
Step 0 05/17 15:16:03	0.1500	-0.552	0.3133	-0.518
Ctop 0 00/1/ 10:10:00	0.1533	-0.556	0.3166	-0.518
Elapsed Time INPUT 1	0.1566	-0.556	0.3200	-0.514
	0.1600	-0.552	0.3233	-0.511
0.0000 -0.216	0.1633	-0.552	0.3266	-0.514
0.0033 -0.711	0.1666	-0.552	0.3300	-0.511
0.0066 -1.096	0.1700	-0.549	0.3333	-0.511
0.0100 -1.531	0.1733	-0.549	0.3500	-0.505
0.0133 -1.175	0.1755	-0.552	0.3666	-0.502
0.0166 -0.966	0.1700	-0.546	0.3833	-0.492
0.0200 -0.645	0.1833	-0.549	0.4000	-0.486
0.0233 -1.077	0.1866	-0.549	0.4166	-0.476
0.0266 -0.940	0.1000	-0.546	0.4333	-0.473
0.0300 -0.718	0.1900	-0.546	0.4500	-0.473
0.0333 -0.889	0.1933	-0.546	0.4666	-0.460
0.0366 -0.848	0.2000	-0.546	0.4833	-0.457
		-0.543	0.5000	-0.445
0.0400 -0.962	0.2033	-0.543	0.5166	-0.438
0.0433 -0.988	0.2066		0.5333	-0.584
0.0466 -1.010	0.2100	-0.543	0.5500	-0.473
0.0500 -0.937	0.2133	-0.543	0.5666	
0.0533 -0.705	0.2166	-0.540		-0.400
0.0566 -0.177	0.2200	-0.540	0.5833	-0.381
0.0600 -0.301	0.2233	-0.540	0.6000	-0.362
0.0633 -0.727	0.2266	-0.540	0.6166	-0.346
0.0666 -0.552	0.2300	-0.537	0.6333	-0.336
0.0700 -0.562	0.2333	-0.537	0.6500	-0.324
0.0733 -0.527	0.2366	-0.537	0.6666	-0.308
0.0766 -0.457	0.2400	-0.537	0.6833	-0.292
0.0800 -0.448	0.2433	-0.537	0.7000	-0.282

0.7166 0.7333 0.7500 0.7666 0.7833 0.8000 0.8166 0.8333 0.8500 0.8666 0.8833 0.9000 0.9166 0.9333 0.9500 0.9666 0.9833 1.0000 1.2000 1.4000 1.6000 1.8000 2.0000 2.2000 2.4000 2.2000 2.4000 2.6000 2.8000 3.0000 3.2000 3.4000 3.6000 3.8000 4.0000 4.4000 4.6000 4.8000 5.0000 5.2000 5.4000 5.6000 6.0000 6.2000 6.8000 6.8000 6.8000	-0.273 -0.263 -0.257 -0.247 -0.238 -0.232 -0.232 -0.222 -0.216 -0.209 -0.206 -0.200 -0.197 -0.177 -0.187 -0.184 -0.177 -0.184 -0.177 -0.185 -0.066 -0.054 -0.051 -0.051 -0.051 -0.051 -0.051 -0.051 -0.006 -0.006 -0.000 -0.000 -0.000 -0.000 0.000	7.8000 8.0000 8.2000 8.4000 9.0000 9.2000 9.4000 9.8000 10.0000 11.0000 13.0000	0.006 0.009 0.009 0.012 0.006 0.009 0.012 0.009 0.009 0.009 0.009 0.0012
6.2000 6.4000 6.6000	0.003 0.006 0.006		

## Rising Head Test for Monitor Well 7-MW3

	0.0833	1.613	0.2466	0.899
	0.0866	1.597	0.2500	0.889
SE1000C	0.0900	1.547	0.2533	0.883
Environmental Logger	0.0933	1.559	0.2566	0.870
05/17 17:25	0.0966	1.543	0.2600	0.851
	0.1000	1.524	0.2633	0.851
Unit# 00831 Test 13	0.1033	1.512	0.2666	0.841
	0.1066	1.527	0.2700	0.826
Setups: INPUT 1	0.1100	1.467	0.2733	0.806
	0.1133	1.458	0.2766	0.797
Type Level (F)	0.1166	1.439	0.2800	0.791
Mode TOC	0.1200	1.419	0.2833	0.787
I.D. 07032	0.1233	1.407	0.2866	0.775
1.5.	0.1266	1.391	0.2900	0.756
Reference 0.000	0.1300	1.375	0.2933	0.759
Linearity 0.030	0.1333	1.356	0.2966	0.749
Scale factor 10.030	0.1366	1.346	0.3000	0.733
Offset 0.040	0.1400	1.324	0.3033	0.721
Delay mSEC 50.000	0.1433	1.312	0.3066	0.724
Delay mole 30.000	0.1466	1.292	0.3100	0.705
Step 0 05/17 15:32:26	0.1500	1.280	0.3133	0.702
Step 0 03/17 13.32.20	0.1533	1.270	0.3166	0.698
Elapsed Time INPUT 1	0.1566	1.251	0.3200	0.689
Elapsed Time 1141 OT 1	0.1600	1.238	0.3233	0.676
0.0000 0.708	0.1633	1.216	0.3266	0.670
	0.1666	1.204	0.3300	0.660
	0.1700	1.191	0.3333	0.651
0.0066 0.597	0.1733	1.191	0.3500	0.606
0.0100 0.193	0.1766	1.162	0.3666	0.575
0.0133 0.422	0.1800	1.153	0.3833	0.540
0.0166 1.461	0.1833	1.134	0.4000	0.514
0.0200 1.296	0.1866	1.121	0.4166	0.473
0.0233 1.505	0.1900	1.105	0.4333	0.448
0.0266 1.915	0.1933	1.076	0.4500	0.419
0.0300 1.842	0.1966	1.083	0.4666	0.413
0.0333 1.924		1.061	0.4833	0.374
0.0366 1.921	0.2000	1.054	0.5000	0.378
0.0400 1.874	0.2033		0.5166	0.362
0.0433 1.845	0.2066	1.038	0.5333	0.346
0.0466 1.794	0.2100	1.032	0.5500	0.327
0.0500 1.794	0.2133	1.016	0.5666	0.327
0.0533 1.788	0.2166	1.000		0.308
0.0566 1.769	0.2200	0.968	0.5833	0.230
0.0600 1.769	0.2233	0.978	0.6000	
0.0633 1.753	0.2266	0.962	0.6166	0.254
0.0666 1.709	0.2300	0.959	0.6333	0.244
0.0700 1.696	0.2333	0.940	0.6500	0.232
0.0733 1.664	0.2366	0.934	0.6666	0.228
0.0766 1.655	0.2400	0.918	0.6833	0.203
0.0800 1.642	0.2433	0.930	0.7000	0.184

0.7166 0.7333 0.7500 0.7666 0.7833 0.8000 0.8166 0.8333 0.8500 0.8666 0.8833 0.9000 0.9166 0.9333 0.9500 0.9666 0.9833 1.0000 1.2000 1.4000 1.6000 1.8000 2.2000 2.4000 2.2000 2.4000 2.2000 2.4000 2.2000 3.4000 3.2000 3.4000 3.6000 3.8000 4.0000 4.4000 4.6000 4.7000 5.0000 5.0000 5.0000 5.0000 5.0000 5.0000 6.0000	0.200 0.197 0.181 0.184 0.174 0.168 0.162 0.158 0.155 0.146 0.139 0.136 0.130 0.127 0.123 0.0127 0.123 0.082 0.050 0.057 0.031 0.022 0.012 0.009 0.003 0.003 0.000 -0.006 -0.009 -0.006 -0.009 -0.006 -0.009 -0.006 -0.009 -0.015 -0.015 -0.015 -0.015 -0.015 -0.015	7.8000 8.0000 8.2000 8.4000 8.6000 9.0000 9.2000 9.4000 9.6000 9.8000 10.0000 11.0000 12.0000 14.0000 15.0000 16.0000	-0.012 -0.022 -0.019 -0.019 -0.019 -0.019 -0.015 -0.015 -0.015 -0.022 -0.022 -0.022 -0.022
6.2000	-0.015		
6.4000	-0.012		
6.6000	-0.015		
6.8000	-0.015		
7.0000	-0.019		
7.2000	0.000		
7.4000	-0.019 0.013		
7.6000	-0.012		

## Falling Head Test for Monitor Well 7-MW5

	0.0833	-0.006	0.2466	-0.003
	0.0866	0.000	0.2500	-0.003
SE1000C	0.0900	-0.006	0.2533	-0.003
Environmental Logger	0.0933	0.000	0.2566	-0.532
05/17 16:46	0.0966	-0.009	0.2600	-0.095
	0.1000	0.003	0.2633	-0.022
Unit# 00831 Test 2	0.1033	-0.009	0.2666	-0.120
	0.1066	0.000	0.2700	-0.352
Setups: INPUT 1	0.1100	-0.003	0.2733	-0.123
	0.1133	-0.003	0.2766	-0.253
Type Level (F)	0.1166	-0.006	0.2800	-0.209
Mode TOC	0.1200	-0.003	0.2833	-0.393
I.D. 07051	0.1233	-0.006	0.2866	-0.542
	0.1266	-0.003	0.2900	-0.415
Reference 0.000	0.1300	-0.006	0.2933	-0.177
Linearity 0.030	0.1333	-0.003	0.2966	-0.383
Scale factor 10.030	0.1366	-0.006	0.3000	-0.545
Offset 0.040	0.1400	-0.003	0.3033	-0.504
Delay mSEC 50.000	0.1433	-0.003	0.3066	-0.558
Bolay 111020 00.000	0.1466	0.000	0.3100	-0.256
Step 0 05/16 14:13:51	0.1500	-0.003	0.3133	-0.501
Gtop 6 00, 10 11.10.01	0.1533	0.003	0.3166	-0.609
Elapsed Time INPUT 1	0.1566	-0.006	0.3200	-0.764
	0.1600	-0.006	0.3233	-0.720
0.0000 -0.009	0.1633	-0.006	0.3266	-0.742
0.0033 0.003	0.1666	-0.003	0.3300	-0.590
0.0066 -0.006	0.1700	-0.006	0.3333	-0.275
0.0100 0.000	0.1733	0.000	0.3500	-0.314
0.0133 -0.006	0.1766	-0.003	0.3666	-0.304
0.0166 -0.009	0.1800	-0.003	0.3833	-0.390
0.0200 0.000	0.1833	-0.003	0.4000	-0.383
0.0233 -0.009	0.1866	0.000	0.4166	-0.377
0.0266 -0.003	0.1900	-0.003	0.4333	-0.374
0.0300 -0.006	0.1933	-0.009	0.4500	-0.371
0.0333 0.000	0.1966	0.000	0.4666	-0.371
0.0366 -0.006	0.2000	-0.006	0.4833	-0.364
0.0400 0.000	0.2033	0.000	0.5000	-0.361
0.0433 -0.006	0.2066	-0.006	0.5166	-0.361
0.0466 0.000	0.2100	-0.003	0.5333	-0.358
0.0500 -0.006	0.2133	0.000	0.5500	-0.355
0.0533 0.000	0.2166	-0.003	0.5666	-0.348
0.0566 -0.003	0.2200	0.000	0.5833	-0.348
0.0600 -0.006	0.2233	0.000	0.6000	-0.348
	0.2266	0.000	0.6166	-0.345
0.0633 -0.003 0.0666 -0.009	0.2300	-0.003	0.6333	-0.342
	0.2333	0.000	0.6500	-0.342
	0.2366	0.000	0.6666	-0.339
	0.2400	0.000	0.6833	-0.336
0.0766 -0.009	0.2433	-0.003	0.7000	-0.333
0.0800 0.000	0.2433	-0.003	0.7000	-0.000

0.7166	-0.333	7.8000	-0.104
0.7333	-0.329	8.0000	-0.104
0.7500	-0.329	8.2000	-0.101
0.7666	-0.329	8.4000	-0.098
0.7833	-0.323	8.6000	-0.095
0.8000	-0.323	8.8000	-0.095
0.8166	-0.320	9.0000	-0.091
0.8333	-0.317	9.2000	-0.088
0.8500	-0.310	9.4000	-0.088
0.8666	-0.314	9.6000	-0.085
0.8833	-0.314	9.8000	-0.082
0.9000	-0.314	10.0000	-0.079
0.9166	-0.310	11.0000	-0.069
0.9333	-0.310	12.0000	-0.060
0.9500	-0.307	13.0000	-0.057
0.9666	-0.307	14.0000	-0.050
0.9833	-0.307	15.0000	-0.044
1.0000	-0.304	16.0000	-0.038
1.2000	-0.285	17.0000	-0.034
1.4000	-0.275	18.0000	-0.031
1.6000	-0.266	19.0000	-0.031
1.8000	-0.256	20.0000	-0.028
2.0000	-0.247	21.0000	-0.028
2.2000	-0.241	22.0000	-0.025
2.4000	-0.231	23.0000	-0.022
2.6000	-0.225	24.0000	-0.022
2.8000	-0.218	25.0000	-0.022
3.0000	-0.212	26.0000	-0.028
3.2000	-0.206	27.0000	-0.031
3.4000	-0.199	28.0000	-0.028
3.6000	-0.193	29.0000	-0.028
3.8000	-0.187	30.0000	-0.028
4.0000	-0.183	31.0000	-0.028
4.2000	-0.177	32.0000	-0.028
4.4000	-0.171	33.0000	-0.025
4.6000	-0.164	34.0000	-0.031
4.8000	-0.161	35.0000	-0.031
5.0000	-0.158		
5.2000	-0.152		
5.4000	-0.149		
5.6000	-0.145		
5.8000	-0.139		
6.0000	-0.136		
6.2000	-0.133		
6.4000	-0.130		
6.6000	-0.126		
6.8000	-0.120		
7.0000	-0.117		
7.2000	-0.114		
7.4000	-0.111		

7.6000

-0.111

## Rising Head Test for Monitor Well 7-MW5

	0.0833	0.881	0.2466	0.466
	0.0866	0.862	0.2500	0.466
SE1000C	0.0900	0.843	0.2533	0.459
Environmental Logger	0.0933	0.821	0.2566	0.463
05/17 16:50	0.0966	0.799	0.2600	0.456
	0.1000	0.780	0.2633	0.456
Unit# 00831 Test 3	0.1033	0.764	0.2666	0.456
	0.1066	0.742	0.2700	0.453
Setups: INPUT 1	0.1100	0.729	0.2733	0.456
	0.1133	0.710	0.2766	0.456
Type Level (F)	0.1166	0.691	0.2800	0.453
Mode TOC	0.1200	0.672	0.2833	0.444
I.D. 07052	0.1233	0.650	0.2866	0.450
	0.1266	0.650	0.2900	0.447
Reference 0.000	0.1300	0.640	0.2933	0.447
Linearity 0.030	0.1333	0.631	0.2966	0.440
Scale factor 10.030	0.1366	0.608	0.3000	0.444
Offset 0.040	0.1400	0.602	0.3033	0.444
Delay mSEC 50.000	0.1433	0.589	0.3066	0.437
Boldy Meze	0.1466	0.580	0.3100	0.447
Step 0 05/16 14:51:16	0.1500	0.574	0.3133	0.437
Stop 0 00/10 14:01:10	0.1533	0.564	0.3166	0.444
Elapsed Time INPUT 1	0.1566	0.551	0.3200	0.434
Liapsed Time IN 01 1	0.1600	0.551	0.3233	0.437
0.0000 0.345	0.1633	0.539	0.3266	0.434
0.0033 0.377	0.1666	0.542	0.3300	0.431
0.0066 0.409	0.1700	0.532	0.3333	0.434
0.0100 0.012	0.1733	0.532	0.3500	0.428
0.0133 -0.003	0.1766	0.517	0.3666	0.421
0.0166 0.288	0.1800	0.517	0.3833	0.418
0.0200 0.621	0.1833	0.507	0.4000	0.415
0.0233 -0.050	0.1866	0.513	0.4166	0.412
0.0266 0.063	0.1900	0.501	0.4333	0.409
0.0300 0.513	0.1933	0.501	0.4500	0.399
0.0333 0.773	0.1966	0.501	0.4666	0.402
0.0366 0.891	0.2000	0.497	0.4833	0.399
	0.2033	0.497	0.5000	0.393
0.0400 1.040 0.0433 1.176	0.2066	0.494	0.5166	0.396
	0.2100	0.488	0.5333	0.386
	0.2133	0.485	0.5500	0.390
	0.2166	0.482	0.5666	0.390
	0.2200	0.478	0.5833	0.374
0.0566 1.075	0.2233	0.478	0.6000	0.383
0.0600 1.046		0.475	0.6166	0.374
0.0633 1.027	0.2266	0.473	0.6333	0.374
0.0666 0.999	0.2300	0.472	0.6500	0.374
0.0700 0.973	0.2333	0.475	0.6666	0.367
0.0733 0.951	0.2366		0.6833	0.364
0.0766 0.932	0.2400	0.472	0.7000	0.364
0.0800 0.907	0.2433	0.469	0.7000	0.304

0.7166	0.361	7.8000	0.101
0.7333	0.358	8.0000	0.098
0.7500	0.358	8.2000	0.095
0.7666	0.355	8.4000	0.092
0.7833	0.352	8.6000	0.092
0.8000	0.348	8.8000	0.088
0.8166	0.348	9.0000	0.085
0.8333	0.345	9.2000	0.085
0.8500	0.345	9.4000	0.082
0.8666	0.342	9.6000	0.082
0.8833	0.339	9.8000	0.079
0.9000	0.339	10.0000	0.076
0.9166	0.339	11.0000	0.069
0.9333	0.336	12.0000	0.066
0.9500	0.333	13.0000	0.060
0.9666	0.333	14.0000	0.053
0.9833	0.333	15.0000	0.053
1.0000	0.329	16.0000	0.050
1.2000	0.304	17.0000	0.047
1.4000	0.288	18.0000	0.044
1.6000	0.275	19.0000	0.041
1.8000	0.263	20.0000	0.041
2.0000	0.253	21.0000	0.038
2.2000	0.244	22.0000	0.038
2.4000	0.231	23.0000	0.034
2.6000	0.225	24.0000	0.034
2.8000	0.215	25.0000	0.034
3.0000	0.209	26.0000	0.034
3.2000	0.203	27.0000	0.034
3.4000	0.193	28.0000	0.034
3.6000	0.187	29.0000	0.031
3.8000	0.180	30.0000	0.034
4.0000	0.174	31.0000	0.031
4.2000	0.171	32.0000	0.031
4.4000	0.164	33.0000	0.031
4.6000	0.158	34.0000	0.031
4.8000	0.155	35.0000	0.028
5.0000	0.149	36.0000	0.025
5.2000	0.145		
5.4000	0.139		
5.6000	0.136		
5.8000	0.133		
6.0000	0.130		
6.2000	0.123		
6.4000 6.6000	0.120		
	0.117		
6.8000	0.114		
7.0000	0.111		
7.2000 7.4000	0.107 0.104		
7.4000	0.104 0.101		

7.6000

0.101

## Falling Head Test for Monitor Well 8-MW2

	0.0833	-0.767	0.2466	-0.529
	0.0866	-0.758	0.2500	-0.526
SE1000C	0.0900	-0.691	0.2533	-0.526
Environmental Logger	0.0933	-0.761	0.2566	-0.520
05/17 17:02	0.0966	-0.780	0.2600	-0.517
	0.1000	-0.815	0.2633	-0.513
Unit# 00831 Test 6	0.1033	-0.732	0.2666	-0.510
	0.1066	-0.685	0.2700	-0.507
Setups: INPUT 1	0.1100	-0.732	0.2733	-0.504
	0.1133	-0.688	0.2766	-0.501
Type Level (F)	0.1166	-0.710	0.2800	-0.498
Mode TOC	0.1200	-0.704	0.2833	-0.494
I.D. 08021	0.1233	-0.694	0.2866	-0.491
	0.1266	-0.701	0.2900	-0.488
Reference 0.000	0.1300	-0.678	0.2933	-0.485
Linearity 0.030	0.1333	-0.688	0.2966	-0.482
Scale factor 10.030	0.1366	-0.669	0.3000	-0.479
Offset 0.040	0.1400	-0.666	0.3033	-0.475
Delay mSEC 50.000	0.1433	-0.663	0.3066	-0.472
Boldy MoLo Gerea	0.1466	-0.656	0.3100	-0.469
Step 0 05/17 08:32:46	0.1500	-0.653	0.3133	-0.466
Stop 0 00/1/ 00:02:10	0.1533	-0.659	0.3166	-0.463
Elapsed Time INPUT 1	0.1566	-0.637	0.3200	-0.460
	0.1600	-0.675	0.3233	-0.456
0.0000 -0.342	0.1633	-0.612	0.3266	-0.453
0.0033 -0.358	0.1666	-0.628	0.3300	-0.453
0.0066 -0.780	0.1700	-0.621	0.3333	-0.450
0.0100 -1.272	0.1733	-0.621	0.3500	-0.434
0.0133 -1.418	0.1766	-0.615	0.3666	-0.418
0.0166 -1.434	0.1800	-0.612	0.3833	-0.406
0.0200 -1.243	0.1833	-0.605	0.4000	-0.393
0.0233 -0.802	0.1866	-0.602	0.4166	-0.383
0.0266 -0.678	0.1900	-0.599	0.4333	-0.371
0.0300 -0.866	0.1933	-0.593	0.4500	-0.361
0.0333 -1.164	0.1966	-0.590	0.4666	-0.352
0.0366 -0.996	0.2000	-0.586	0.4833	-0.342
0.0400 -0.831	0.2033	-0.580	0.5000	-0.333
0.0433 -0.612	0.2066	-0.577	0.5166	-0.323
0.0466 -0.612	0.2100	-0.574	0.5333	-0.317
0.0500 -0.958	0.2133	-0.567	0.5500	-0.307
0.0533 -0.970	0.2166	-0.564	0.5666	-0.301
0.0566 -0.850	0.2200	-0.561	0.5833	-0.291
0.0600 -0.704	0.2233	-0.558	0.6000	-0.285
0.0633 -0.805	0.2266	-0.555	0.6166	-0.279
0.0666 -0.745	0.2300	-0.548	0.6333	-0.272
	0.2333	-0.545	0.6500	-0.266
	0,2366	-0.542	0.6666	-0.256
	0.2400	-0.539	0.6833	-0.253
	0.2433	-0.536	0.7000	-0.250
0.0800 -0.783	0.2433	-0,550	3.7030	5.200

0.7166	-0.244	7.8000	-0.038
0.7333	-0.237	8.0000	-0.038
0.7500	-0.234	8.2000	-0.038
0.7666	-0.231	8.4000	-0.038
0.7833	-0.228	8.6000	-0.038
0.8000	-0.225	8.8000	-0.034
0.8166	-0.218	9.0000	-0.038
0.8333	-0.279	9.2000	-0.034
0.8500	-0.212	9.4000	-0.038
0.8666	-0.206	9.6000	-0.041
0.8833	-0.203	9.8000	-0.038
0.9000	-0.196	10.0000	-0.038
0.9166	-0.193	11.0000	-0.034
0.9333	-0.193	12.0000	-0.031
0.9500	-0.190	13.0000	-0.031
0.9666	-0.184	14.0000	-0.034
0.9833	-0.184	15.0000	-0.031
1.0000	-0.180	16.0000	-0.031
1.2000	-0.142	17.0000	-0.034
1.4000	-0.120	18.0000	-0.038
1.6000	-0.107	19.0000	-0.038
1.8000	-0.098	20.0000	-0.038
2.0000	-0.085	21.0000	-0.034
2.2000	-0.079	22.0000	-0.034
2.4000	-0.072	23.0000	-0.034
2.6000	-0.066	24.0000	-0.034
2.8000	-0.063	25.0000	-0.038
3.0000	-0.060	26.0000	-0.034
3.2000	-0.057	27.0000	-0.034
3.4000	-0.053	28.0000	-0.038
3.6000	-0.053	29.0000	-0.041
3.8000	-0.050	30.0000	-0.034
4.0000	-0.050	31.0000	-0.034
4.2000	-0.047	32.0000	-0.034
4.4000	-0.047	33.0000	-0.031
4.6000	-0.044	34.0000	-0.034
4.8000	-0.044	35.0000	-0.034
5.0000	-0.044	36.0000	-0.044
5.2000	-0.041	33.3333	0.011
5.4000	-0.044		
5.6000	-0.041		
5.8000	-0.041		
6.0000	-0.041		
6.2000	-0.041		
6.4000	-0.041		
6.6000	-0.041		
6.8000	-0.041		
7.0000	-0.041		
7.2000	-0.041		
7.4000	-0.038		
7.6000	-0.038		

## Rising Head Test for Monitor Well 8-MW2

				0.404
	0.0833	0.910	0.2466	0.494
	0.0866	0.916	0.2500	0.485
SE1000C	0.0900	0.910	0.2533	0.482
Environmental Logger	0.0933	0.878	0.2566	0.475
05/17 17:05	0.0966	0.878	0.2600	0.475
	0.1000	0.862	0.2633	0.466
Unit# 00831 Test 7	0.1033	0.853	0.2666	0.447
	0.1066	0.840	0.2700	0.456
Setups: INPUT 1	0.1100	0.834	0.2733	0.450
	0.1133	0.815	0.2766	0.447
Type Level (F)	0.1166	0.802	0.2800	0.447
Mode TOC	0.1200	0.805	0.2833	0.437
I.D. 08022	0.1233	0.783	0.2866	0.434
1.5.	0.1266	0.777	0.2900	0.418
Reference 0.000	0.1300	0.764	0.2933	0.425
Linearity 0.030	0.1333	0.754	0.2966	0.421
Scale factor 10.030	0.1366	0.742	0.3000	0.415
Offset 0.040	0.1400	0.732	0.3033	0.412
Delay mSEC 50.000	0.1433	0.723	0.3066	0.412
Delay MoLO 00.000	0.1466	0.720	0.3100	0.402
Step 0 05/17 09:11:33	0.1500	0.707	0.3133	0.402
Step 0 03/17 09:11:00	0.1533	0.694	0.3166	0.396
Elapsed Time INPUT 1	0.1566	0.672	0.3200	0.393
Elapsed Time IN OT T	0.1600	0.669	0.3233	0.390
0.0000 1.091	0.1633	0.669	0.3266	0.390
	0.1666	0.653	0.3300	0.383
	0.1700	0.650	0.3333	0.380
0.0066 1.287	0.1733	0.640	0.3500	0.364
0.0100 1.281	0.1766	0.634	0.3666	0.345
0.0133 1.262	0.1800	0.631	0.3833	0.336
0.0166 1.237	0.1833	0.615	0.4000	0.320
0.0200 1.268	0.1866	0.609	0.4166	0.304
0.0233 1.202	0.1900	0.602	0.4333	0.288
0.0266 1.183	0.1933	0.599	0.4500	0.285
0.0300 1.164	0.1966	0.586	0.4666	0.272
0.0333 1.116	0.1988	0.583	0.4833	0.263
0.0366 1.135		0.583	0.5000	0.256
0.0400 1.097	0.2033		0.5166	0.253
0.0433 1.110	0.2066	0.570	0.5333	0.241
0.0466 1.087	0.2100	0.561	0.5500	0.234
0.0500 1.081	0.2133	0.555	0.5666	0.235
0.0533 1.049	0.2166	0.520		0.223
0.0566 1.046	0.2200	0.551	0.5833	0.222
0.0600 0.976	0.2233	0.532	0.6000	0.213
0.0633 0.976	0.2266	0.532	0.6166	
0.0666 0.999	0.2300	0.520	0.6333	0.206 0.203
0.0700 0.986	0.2333	0.520	0.6500	
0.0733 0.983	0.2366	0.510	0.6666	0.196
0.0766 0.916	0.2400	0.513	0.6833	0.193
0.0800 0.942	0.2433	0.491	0.7000	0.187

0.7166 0.7333 0.7500 0.7666 0.7833 0.8000 0.8166 0.8333 0.8500 0.8666 0.8833 0.9000 0.9166 0.9333 0.9500 0.9666 0.9833 1.0000 1.2000 1.4000 1.6000 1.8000 2.0000 2.2000 2.4000 2.6000 2.8000 3.0000 3.2000 3.4000 3.6000	0.187 0.180 0.177 0.171 0.171 0.168 0.161 0.158 0.152 0.149 0.145 0.142 0.142 0.139 0.136 0.136 0.111 0.098 0.082 0.079 0.063 0.060 0.053 0.057 0.050 0.044 0.038 0.038	7.8000 8.0000 8.2000 8.4000 8.6000 8.8000 9.0000 9.2000 9.4000 9.6000 10.0000 11.0000 12.0000 13.0000 14.0000 15.0000 16.0000 17.0000 18.0000 20.0000 21.0000 22.0000 23.0000 24.0000 25.0000 26.0000	0.031 0.034 0.034 0.034 0.028 0.028 0.028 0.031 0.025 0.031 0.034 0.034 0.034 0.034 0.038 0.031 0.028 0.031 0.028 0.031 0.028
3.6000 3.8000	0.038 0.038		
4.0000	0.038		
4.2000 4.4000	0.041 0.034		
4.6000	0.034		
4.8000	0.038		
5.0000	0.038		
5.2000 5.4000	0.038 0.034		
5.6000	0.034		
5.8000	0.031		
6.0000	0.031		
6.2000 6.4000	0.038 0.034		
6.6000	0.034		
6.8000	0.034		•
7.0000	0.034		
7.2000 7.4000	0.038 0.034		•
7.4000 7.6000	0.034		

## Falling Head Test for Monitor Well 8-MW4

	0.0833	-0.383	0.2466	-0.396
	0.0866	-0.351	0.2500	-0.402
SE1000C	0.0900	-0.421	0.2533	-0.399
Environmental Logger	0.0933	-0.434	0.2566	-0.402
05/17 17:08	0.0966	-0.396	0.2600	-0.402
	0.1000	-0.393	0.2633	-0.399
Unit# 00831 Test 8	0.1033	-0.412	0.2666	-0.390
	0.1066	-0.399	0.2700	-0.402
Setups: INPUT 1	0.1100	-0.405	0.2733	-0.396
	0.1133	-0.405	0.2766	-0.399
Type Level (F)	0.1166	-0.402	0.2800	-0.399
Mode TOC	0.1200	-0.405	0.2833	-0.393
I.D. 08041	0.1233	-0.402	0.2866	-0.402
	0.1266	-0.402	0.2900	-0.396
Reference 0.000	0.1300	-0.405	0.2933	-0.399
Linearity 0.030	0.1333	-0.402	0.2966	-0.399
Scale factor 10.030	0.1366	-0.405	0.3000	-0.399
Offset 0.040	0.1400	-0.405	0.3033	-0.396
Delay mSEC 50.000	0.1433	-0.402	0.3066	-0.399
20/a, 11/22	0.1466	-0.405	0.3100	-0.396
Step 0 05/17 10:15:08	0.1500	-0.402	0.3133	-0.399
Gtop 6 Go, 11 To. 1010	0.1533	-0.402	0.3166	-0.396
Elapsed Time INPUT 1	0.1566	-0.396	0.3200	-0.396
	0.1600	-0.412	0.3233	-0.396
0.0000 0.009	0.1633	-0.402	0.3266	-0.396
0.0033 -0.428	0.1666	-0.412	0.3300	-0.396
0.0066 -0.764	0.1700	-0.399	0.3333	-0.396
0.0100 -1.541	0.1733	-0.405	0.3500	-0.393
0.0133 -1.119	0.1766	-0.380	0.3666	-0.396
0.0166 -0.418	0.1800	-0.393	0.3833	-0.393
0.0200 -1.014	0.1833	-0.447	0.4000	-0.393
0.0233 -0.713	0.1866	-0.383	0.4166	-0.393
0.0266 -0.868	0.1900	-0.339	0.4333	-0.393
0.0300 -0.358	0.1933	-0.497	0.4500	-0.393
0.0333 -0.275	0.1966	-0.412	0.4666	-0.390
0.0366 -0.123	0.2000	-0.377	0.4833	-0.386
	0.2033	-0.393	0.5000	-0.386
0.0400 -0.418 0.0433 -0.561	0.2066	-0.501	0.5166	-0.390
0.0466 -0.659	0.2100	-0.342	0.5333	-0.386
	0.2133	-0.323	0.5500	-0.386
0.0500 -0.561 0.0533 -0.244	0.2166	-0.428	0.5666	-0.383
	0.2100	-0.447	0.5833	-0.386
0.0566 -0.088	0.2233	-0.399	0.6000	-0.390
0.0600 -0.440		-0.364	0.6166	-0.386
0.0633 -0.516	0.2266 0.2300	-0.402	0.6333	-0.383
0.0666 -0.459		-0.412	0.6500	-0.383
0.0700 -0.282	0.2333	-0.399	0.6666	-0.396
0.0733 -0.345	0.2366	A Committee of the Comm	0.6833	-0.383
0.0766 -0.462	0.2400	-0.396	0.7000	-0.383
0.0800 -0.459	0.2433	-0.402	0.7000	-0.503

-0.380	7.8000	-0.015
-0.383	8.0000	-0.012
-0.383	8.2000	-0.009
-0.380	8.4000	-0.006
-0.377	8.6000	-0.006
-0.377	8.8000	-0.009
-0.374	9.0000	-0.006
-0.351	9.2000	-0.003
-0.383	9.4000	-0.006
	9.6000	-0.003
	9.8000	-0.003
		-0.003
		0.000
		0.006
		0.009
		0.012
		0.009
		0.012
		0.015
		0.015
		0.015
		0.015
		0.019
		0.019
		0.015 0.015
		0.009
		0.009
		0.012
		0.012
-0.098		
-0.088		
-0.076		
-0.066		
-0.063		
-0.057	•	
-0.053		
-0.047		
0.010		
	-0.383 -0.383 -0.380 -0.377 -0.377 -0.374 -0.351 -0.383 -0.377 -0.374 -0.374 -0.374 -0.367 -0.361 -0.365 -0.501 -0.361 -0.355 -0.345 -0.336 -0.323 -0.288 -0.253 -0.218 -0.136 -0.114 -0.098 -0.066 -0.063 -0.067 -0.0657 -0.053	-0.383 8.0000 -0.383 8.2000 -0.380 8.4000 -0.377 8.6000 -0.377 8.8000 -0.374 9.0000 -0.351 9.2000 -0.383 9.4000 -0.374 9.8000 -0.374 10.0000 -0.374 11.0000 -0.374 12.0000 -0.374 12.0000 -0.367 13.0000 -0.367 13.0000 -0.367 13.0000 -0.361 17.0000 -0.365 15.0000 -0.501 16.0000 -0.501 16.0000 -0.345 19.0000 -0.345 19.0000 -0.345 19.0000 -0.345 19.0000 -0.323 21.0000 -0.323 21.0000 -0.328 22.0000 -0.328 22.0000 -0.253 23.0000 -0.218 24.0000 -0.183 25.0000 -0.183 25.0000 -0.114 28.0000 -0.114 28.0000 -0.008 -0.0088 -0.076 -0.066 -0.063 -0.076 -0.066 -0.0031 -0.0031 -0.0031 -0.0031 -0.0022 -0.0022 -0.0022 -0.0022 -0.0015 -0.015

## Rising Head Test for Monitor Well 8-MW4

				0.0400	0.000
		0.0833	1.128	0.2466	0.808
		0.0866	1.115	0.2500	0.798
SE1000C		0.0900	1.109	0.2533	0.795
Environmenta	l Logger	0.0933	1.103	0.2566	0.789
05/17 17:11		0.0966	1.084	0.2600	0.786
		0.1000	1.093	0.2633	0.779
Unit# 00831 T	Гest 9	0.1033	1.077	0.2666	0.776
		0.1066	1.071	0.2700	0.770
Setups: INF	PUT 1	0.1100	1.077	0.2733	0.767
	· <del>-</del> -	0.1133	1.062	0.2766	0.757
Type Leve	el (F)	0.1166	1.052	0.2800	0.751
Mode TO	С	0.1200	1.043	0.2833	0.751
I.D. 08042	2	0.1233	1.039	0.2866	0.745
		0.1266	1.030	0.2900	0.729
Reference	0.000	0.1300	1.024	0.2933	0.738
	.030	0.1333	1.020	0.2966	0.722
	10.030	0.1366	1.008	0.3000	0.726
	040	0.1400	1.008	0.3033	0.713
Delay mSEC	50.000	0.1433	1.004	0.3066	0.716
<b>-,</b>		0.1466	0.989	0.3100	0.707
Step 0 05/17 1	0:44:31	0.1500	0.985	0.3133	0.713
		0.1533	0.976	0.3166	0.694
Elapsed Time	INPUT 1	0.1566	0.973	0.3200	0.697
		0.1600	0.966	0.3233	0.684
0.0000 0	.152	0.1633	0.957	0.3266	0.681
	.084	0.1666	0.954	0.3300	0.678
	.586	0.1700	0.941	0.3333	0.672
	.014	0.1733	0.941	0.3500	0.656
	.214	0.1766	0.932	0.3666	0.624
	.359	0.1800	0.932	0.3833	0.599
	.309	0.1833	0.922	0.4000	0.589
	.299	0.1866	0.916	0.4166	0.570
	.268	0.1900	0.913	0.4333	0.538
	.249	0.1933	0.900	0.4500	0.532
	.249	0.1966	0.897	0.4666	0.513
	.220	0.2000	0.887	0.4833	0.494
	.236	0.2033	0.884	0.5000	0.481
	.204	0.2066	0.871	0.5166	0.469
	.214	0.2100	0.875	0.5333	0.456
	.198	0.2133	0.862	0.5500	0.447
	.198	0.2166	0.865	0.5666	0.434
	.185	0.2200	0.852	0.5833	0.418
	.176	0.2233	0.849	0.6000	0.415
	.169	0.2266	0.840	0.6166	0.402
	.160	0.2300	0.833	0.6333	0.396
		0.2333	0.830	0.6500	0.386
	1.153	0.2355	0.824	0.6666	0.383
	.122	0.2300	0.814	0.6833	0.374
	1.144			0.7000	0.370
0.0800 1	1.131	0.2433	0.814	0.7000	0.570

0.7166	0.364	7.8000	0.028
0.7333	0.358	8.0000	0.028
0.7500	0.355	8.2000	0.028
0.7666	0.355	8.4000	0.025
0.7833	0.345	8.6000	0.022
0.8000	0.332	8.8000	0.025
0.8166	0.317	9.0000	0.022
0.8333	0.326	9.2000	0.022
0.8500	0.320	9.4000	0.019
0.8666	0.317	9.6000	0.019
0.8833	0.313	9.8000	0.019
0.9000	0.310	10.0000	0.019
0.9166	0.304	11.0000	0.015
0.9333	0.301	12.0000	0.019
0.9500	0.301	13.0000	0.015
0.9666	0.266	14.0000	0.015
0.9833	0.288	15.0000	0.015
1.0000	0.282	16.0000	0.009
1.2000	0.244	17.0000	0.009
1.4000	0.221	18.0000	0.009
1.6000	0.202	19.0000	0.006
1.8000	0.190		
2.0000	0.174		
2.2000	0.161		
2.4000 2.6000	0.149 0.139		
2.8000	0.139		
3.0000	0.133		
3.2000	0.123		
3.4000	0.110		
3.6000	0.107		
3.8000	0.095		
4.0000	0.085		
4.2000	0.079		
4.4000	0.076		
4.6000	0.072		
4.8000	0.069		
5.0000	0.066		
5.2000	0.063		
5.4000	0.063		
5.6000	0.053		
5.8000	0.050		
6.0000	0.047		
6.2000	0.047		
6.4000	0.044		
6.6000	0.041		
6.8000	0.041		
7.0000	0.038		
7.2000	0.034		•
7.4000	0.031		
7.6000	0.031		

## APPENDIX I SURVEY DATA



## OPERATIONAL TECHNOLOGIES CORPORATION

June 12, 1996

Mr. Fritz Lebow Lockheed Martin Energy Systems, Inc. 831 Tri-County Boulevard Oliver Springs, Tennessee 37840

Re:

Montana Air National Guard

Great Falls, Montana

Subcontract No. 95K-GWU13V

Dear Mr. Lebow:

Enclosed please find the survey information for the above referenced project in hard and electronic copy.

Sine<del>cre</del>ly

David Bunn

Project Manager

cc:

File

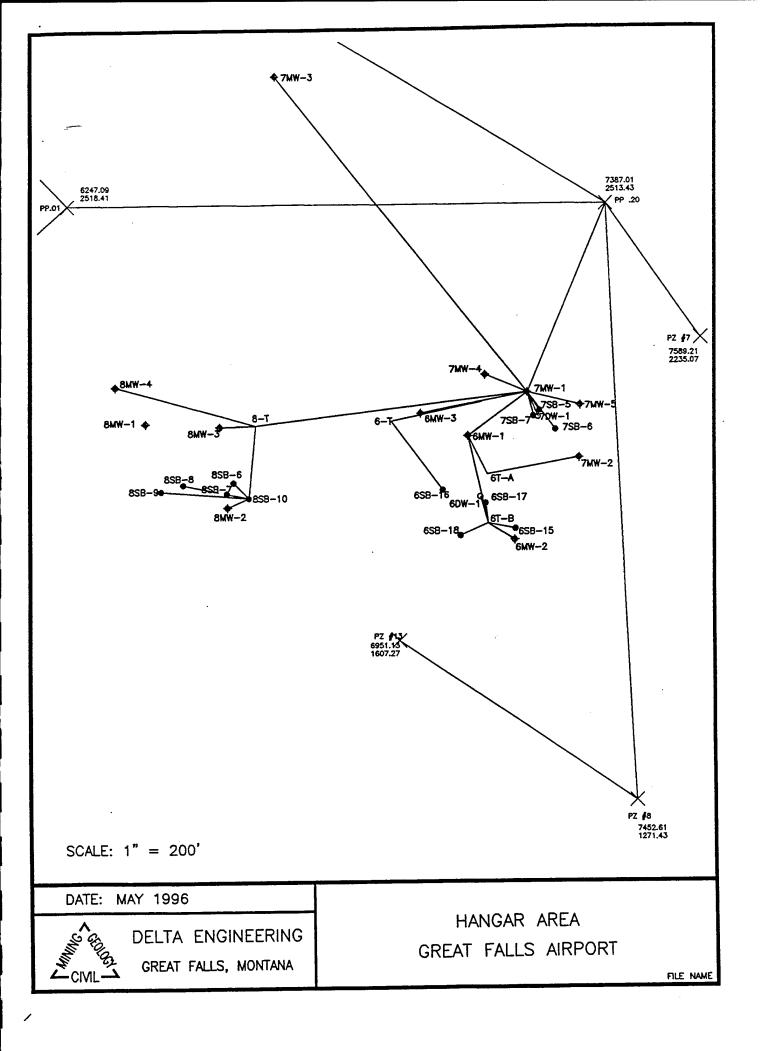
#### **OPTECH AIR NATIONAL GUARD**

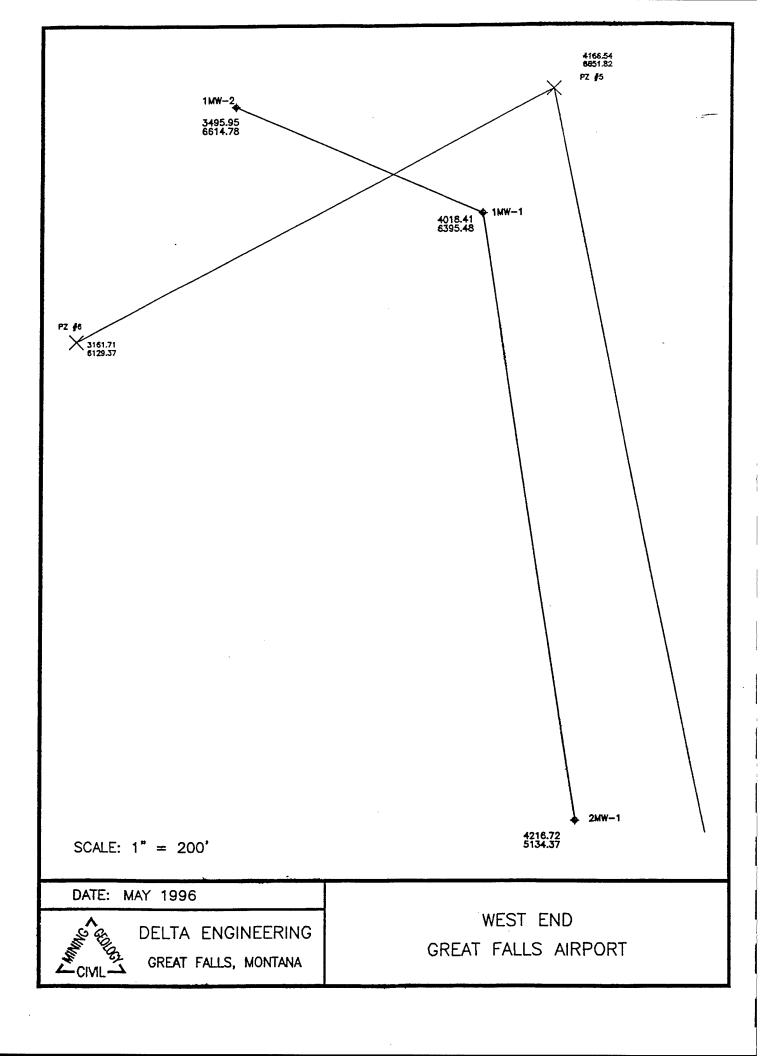
#### **MAY 1996**

Test Hole #	<u>North</u>	<u>East</u>	<u>Elevation</u>		
1MW-1	4018.41	6395.48	Brass Cap	=	3654.48
2MW-1	4216.72	5134.37	Brass Cap	=	3656.93
1MW-2	3495.95	6614.78	Top Steel Top PVC Ground	=	3653.35 3652.69 3550.91
7MW-1	7220.05	2123.93	Brass Cap	=	3675.45
7MW-2	7330.81	1987.35	Top PVC Ground	=	3676.21 3676.53
7MW-3	6687.51	2784.85	Top PVC Ground	= =	3667.82 3667.31
7MW-4	7131.83	2160.56	Top PVC Ground	=	3675.98 3676.29
7MW-5	7332.93	2095.92	Top PVC Ground	=	3675.55 3675.81
7SB-5	7246.62	2085.32	Pavement	=	3675.79
7SB-6	7280.78	2045.66	Ground	=	3676.50
7SB-7	7233.53	2073.82	Pavement	=	3675.97
7DW-1	7243.57	2071.90	Ground	=	3676.10
6MW-1	7096.76	2034.19	Brass Cap (has bee		
6MW-2	7193.73	1817.64	Top PVC Ground		3675.86 3676.16

Test Hole #	<u>North</u>	<u>East</u>	Elevation		
6MW-3	6996.51	2080.84	Top PVC Ground	=	3676.32 3676.60
6-SB-15	7195.37	1840.46	Pavement	=	3676.16
6-SB-16	7043.63	1921.21	Concrete	=	3676.69
6-SB-17	7133.07	1893.36	Pavement	=	3676.54
6-SB-18	7081.28	1826.76	Pavement	=	3676.42
6-DW-1	7122.27	1906.85	Pavement	=	3676.35
8MW-2	6585.74	1887.25	Top PVC Pavement	=	3675.64 3675.90
8MW-3	6569.63	2055.04	Top PVC Pavement	=	3675.66 3675.96
8MW-4	6349.01	2140.48	Top PVC Pavement	=	3674.68 3674.98
8SB-6 8SB-7 8SB-8 8SB-9 8SB-10	6598.45 6584.55 6492.51 6445.75 6631.33	1939.17 1916.17 1934.73 1921.33 1906.41	Pavement Pavement Pavement Pavement Pavement	= = =	3675.99 3675.79 3675.95 3675.93 3675.00
82R-10	0031.33	1906.41	ravement	=	36/5.00

The elevations given to Delta Engineering were listed in meters and only to the nearest 0.10m (0.01m = 0.31Ft.). Therefore, the elevations may vary  $\pm$  0.15 Ft.





# APPENDIX J INVESTIGATION DERIVED WASTE



October 7, 1996

William H. Hedberg, Hydrogeologist Hazardous Waste Remedial Actions Program 831 Tri-County Boulevard Oliver Springs, TN 37840

#### Dear Bill:

As we discussed, Montana Air National Guard is permitted to dispose of the decontamination, purge and development water described in your letter of September 25, 1996 to the sanitary sewer under the following conditions:

- The 150 gallons of decontamination water must be diluted with 150 gallons of potable water prior to discharge.
- The diluted decontamination water must be discharged during the day with the discharge spread over a period of several hours at a reasonably constant rate.

There are no conditions imposed on the discharge of the purge and development water. If you have any questions or comments, please feel free to contact me at 406-727-1325.

Sincerely,

Mike Jacobson, Public Utilities Plant Supervisor

City of Great Falls/Water Plant

cc: Read File (2)

#### Lockheed Martin Energy Systems

Post Office Box 2003

Oak Ridge, Tennessee 37831 - 7606

Telephone: 423-435-3572

Facsimile: 423-435-3269



September 25, 1996

Mr. Dave Dobbs, City Engineer Department of Public Works City of Great Falls Post Office Box 5021 Great Falls, Montana 59403

Dear Mr. Dobbs:

Disposal of Containerized Water at the Montana Air National Guard Base, Great Falls International Airport, Great Falls, Montana

The Hazardous Waste Remedial Actions Program (HAZWRAP) and its subcontractor, Operational Technologies (OpTech), have completed remedial investigation field activities at the Montana Air National Guard Base, Great Falls International Airport, Great Falls, Montana. Activities associated with the investigation generated two containers of waste waters: one 1100-gallon polyethylene tank containing water from the development and purging of groundwater monitoring wells, and a second 550-gallon polyethylene tank containing water generated from the decontamination of sampling and drilling equipment.

On behalf of the Montana Air National Guard, HAZWRAP is requesting permission from the Department of Public Works, City of Great Falls to discharge these contained volumes of water into the sanitary sewer system of the Montana Air National Guard Base. Analytical results from the sampling of the two containers, DCPW-1 (decontamination water) and PADW-1 (purge and development water) are attached. Based on the analytical results obtained from the laboratory, the organic and inorganic constituents appear to be acceptable for discharge into the sanitary sewer system. The acetone concentrations reported are associated with the use of isopropanol, a commonly utilized decontamination fluid. The volume of water in container DCPW-1 is estimated to be 150 gallons and that in container PADW-1 is estimated to be 550 gallons.

Due to the approaching winter and attendant freeze problems, we would appreciate your approval for the discharge as soon as possible. We will notify the appropriate water department personnel before discharging any liquids. If you have any questions regarding this submittal please feel free to contact me at 423-435-3572.

Sincerely,

William W W William H. Hedberg, Hydrogeologist

Hazardous Waste Remedial Actions Program

WHH:rmf

Attachments

c: Mike Frey, ANGRC Aimee Reynolds, Montana DEQ Mike Jacobsen, Dept of Public Works Iver Johnson, Montana ANG J. W. Johnston, HAZWRAP

406 Jug- 1325

#### 1LCA LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

PADW-1

Lab Name: Laucks Testing Labs

SDG No.: OP11X

Lab Sample ID: 9607483-02

Date Received: 07/15/96

Lab File ID:

U0723017.D

Date Analyzed: 07/23/96

Purge Vol:

25.0

ML

Dilution Factor: 1.0

CONCENTRATION

CAS NO.	COMPOUND .	(ug/L)	Q
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	20	
75-15-0	: Carbon disulfide	1.0	U
75-09-2	Methylene chioride	2.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
156-59-2	cis-1,2-Dichloroethene	2.2	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	1.0	U
67-66-3	Chloroform	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
71-43-2	Benzene	0.36	J
79-01-6	Trichloroethene	0.15	J
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chiorobenzene	1.0	U
100-41-4	Ethylbenzene Ethylbenzene	0.11	J
100-42-5	Styrene	1.0	U
79-34-5	1,1,2.2-Tetrachloroethane	1.0	U
75-25-2	Bromoform	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
1330-20-7	Xylene (total)	0.19	J

FORM I VOA

.Form Ver. 1.0 4-22-96

#### 1E LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

COMPOUND

CAS NO.

SAMPLE NO.

PADW-1

Lab Name: La	ucks Testing Lab	s		SDG No.: OP11X
Matrix: (soil/wate	er) WATER	_	Date Received:	07/15/96
Lab Sample ID:	9607483-02		Date Analyzed:	07/23/96
Lab File ID:	U0723017.D		Dilution Factor:	1.0
Purge Vol:	25.0	(g/ml) ML		
Number TICs fo	und: 0			

RT

EST. CONC.

#### 1B SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

•	SEMIVOLATILE ORGANICS ANA	4L 1 313 DA	TA SHEET	PADW-1
Lap Name:	Laucks Testing Laboratory	Contract:		

Lab Code:	Case No.:	SAS No.:	SDG No.: OPIIX
		Lab Sample ID:	0607483_02
Matrix: (soil/water)	WATER	Lab Sample ID	9007403-02

 WATER
 Lab Sample ID:
 9607483-02

 1000
 (g/ml) ML
 Lab File ID:
 LU072405.D

% Moisture: decanted:(Y/N) N Date Extracted: 07/16/96

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 07/24/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9

			1104	Q
CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
	bis(2-Chloroethyl)ether	1	10	U
111-44-4	Phenol		10	U
108-95-2	2-Chlorophenol		10	U
95-57-8	1,3-Dichlorobenzene		10	U
541-73-1	1,4-Dichlorobenzene		10	U
106-46-7	1,2-Dichlorobenzene	······································	10	U
95-50-1	2-Methylphenol		10	U
95-48-7	Hexachloroethane		10	U
67-72-1	N-Nitroso-di-n-propylamir	ne	10	U
621-64-7			10	U
106-44-5	4-Methylphenol		10	U
98-95-3	Nitrobenzene		10	U
78-59-1	Isophorone	!	10	U
88-75-5	2-Nitrophenol	:	10	U
105-67-9	2,4-Dimethylphenol bis(2-Chloroethoxy)meth	ane	10	U
111-91-1	bis(2-Chloroethoxy)meth	anc	10	U
120-83-2	2,4-Dichlorophenol		10	U
120-82-1	1,2,4-Trichlorobenzene		10	U
91-20-3	Naphthalene		10	U
106-47-8	4-Chloroaniline		10	U
87-68-3	Hexachlorobutadiene	1	10	U
59-50-7	4-Chloro-3-methylpheno	<u> </u>	10	Ū
91-57-6	2-Methylnaphthalene		10	·Ū
77-47-4	Hexachlorocyclopentadi	ene	10	U
88-06-2	2,4,6-Trichlorophenol		25	Ū
95-95-4	2.4.5-Trichlorophenol		10	Ū
91-58-7	2-Chloronaphthalene		25	Ü
88-74-4	2-Nitroaniline		10	Ü
208-96-8	Acenaphthylene		10	Ŭ
131-11-3	Dimethylphthalate		10	Ü
606-20-2	2,6-Dinitrotoluene		10	Ū
83-32-9	Acenaphthene		25	Ü
99-09-2	3-Nitroaniline		25	U U
51-28-5	2,4-Dinitrophenol		10	U
132-64-9	Dibenzofuran		10	<u>.</u>
121-14-2	2,4-Dinitrotoluene			U U
100-02-7	4-Nitrophenol			บ
86-73-7	Fluorene	. <u> </u>	10	

#### 1C SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

PADW-1

Lab Name: Laucks	Testing Lab	oratory		Contract	
Lab Code:	Ca	se No			DG No.: OP11X
Matrix: (soil/water)	WATER			Lab Sample ID:	9607483-02
Sample wt/vol:	1000	– (g/ml)	ML	Lab File ID:	LU072405.D
·	LOW	. (3 /		Date Received:	07/15/96
Level: (low/med)		- canted:(`	Y/N) N	Date Extracted:	07/16/96
% Moisture:	<del></del>		(uL)	Date Analyzed:	07/24/96
Concentrated Extract		1000	(00)	Dilution Factor	1.0
Injection Volume: 2	<u>.0</u> (uL)			Diidion i dotoi:	
GPC Cleanup: (Y/N)	Y	pH: 9			

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
	4-Chlorophenyl-phenylethe	r .	10	U
7005-72-3	4-Chlorophienyi-prienyicare	·	10	U
84-66-2	Diethylphthalate		25	U
100-01-6	4-Nitroaniline		25	U
534-52-1	4.6-Dinitro-2-methylphenol		10	U
86-30-6	n-Nitrosodiphenylamine		10	Ū
101-55-3	4-Bromophenyl-phenylethe	<u> </u>	10	U
118-74-1	Hexachlorobenzene		25	U
87-86-5	Pentachlorophenol		10	U
85-01-8	Phenanthrene		10	Ū
120-12-7	Anthracene		10	Ū
86-74-8	Carbazole		10	U
84-74-2	Di-n-butylphthalate	<del></del>	10	U
206-44-0	Fluoranthene		10	<del>U</del>
129-00-0	Pyrene	<u> </u>	10	<del>U</del>
85-68-7	Butylbenzylphthalate			<del>U</del>
91-94-1	3,3'-Dichlorobenzidine		10	<del>- U</del>
56-55-3	Benzo[a]anthracene		10	<del>- U</del> -
218-01-9	Chrysene		10	
117-81-7	bis(2-Ethylhexyl)phthalate		1	JB
117-84-0	Di-n-octylphthalate		10	<u> </u>
205-99-2	Benzo[b]fluoranthene		10	U
207-08-9	Benzo[k]fluoranthene	i i	10	U
	Benzo[a]pyrene	:	10	. U
50-32-8	Indeno[1,2,3-cd]pyrene		10	U
193-39-5	Dibenz[a,h]anthracene		10	U
53-70-3	Benzo[g,h,i]perylene		10	U
191-24-2	Benzolg, it, ilberylene			

#### 1F SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET SAMPLE NO. TENTATIVELY IDENTIFIED COMPOUNDS

		PAD	AA-1	i
_ab Name: Laucks Testing Laboratory Con	tract:	_		
Lab Code: Case No.: S.	AS No.:	SDG No.: OP1	1X	
Matrix: (soil/water) WATER	Lab Sample ID	9607483-02	· · · · · · · · · · · · · · · · · · ·	
Sample wt/voi: 1000 (g/mi) ML	Lab File ID:	LU072405.D	<del></del>	
Level: (low/med) LOW	Date Received	: 07/15/96	<del></del>	
% Moisture: decanted: (Y/N) N	Date Extracted	: 07/16/96		
Concentrated Extract Volume: 1000 (uL)	Date Analyzed	07/24/96		
Injection Volume: 2.0 (uL)	Dilution Factor	1.0		
GPC Cleanup: (Y/N) Y pH: 9				
600	ICENTRATION UI	NITS:		
		3/L		
CAS NUMBER COMPOUND NAME	RT	EST. CONC.	Q	
l	8.09	3 :	JΒ	
1. unknown alcohol 2. unknown alcohol	8.34	2	JB	المستاده
3. 000100-42-5 Styrene	8.61	4	JN	00
4. 000120-40-1 Dodecanamide, N.N-bis(2-hydro	x 22.03	22	JN	
5. 000057-10-3 Hexadecanoic acid	27.64	2	JN	
6. unknown	29.63	4	J	
7 unknown	37.40	3	<u> </u>	

unknown

U.S. ERA - CLR

INORGANIO ANALYSIS DATA SHEET

Lab Name: LAUCKS TESTING LABS. INC. Contract:

EFA SAMPLE NO.

Matrix (soil/water): WATER

Lab Sample ID: 07483-02

level (low/med): LOW

Date Received: 07/15/96

: Solids:

0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

lcas No.	   Analyte 	  Concentration 		Q	M :
17429-90-5	lAluminum		1 1		1 ;
17440-36-0	Antimony	5.0	<u>: U :</u>		<u> </u>
17440-38-2	l <u>Arsenic</u>	1 <u>.</u> 2	BI		!F!
17440-39-3	Barium	29.9	<u> </u>		! F' !
17440-41-7	:Beryllium	0.30	<u>: u:</u>		<u> </u>
17440-43-9	Cadmium	2.0	<u>: U :</u>		F'
1 <u>7440-70-2</u>	Calcium_	! !	!!		<u> </u>
17440-47-3	!Chromium	6.0	<u>: U :</u>		! F'!
17440-48-4	Cobalt	1	1_1		
1 <u>7440-50-8</u>	Copper	4.0	<u>: U :</u>		<u> </u>
17439-89-6	!Iron	!	1	<u></u>	;
17439-92-1	Lead	1.0	١ <u>U</u> !		_!F_!
17439-95-4	Magnesium	1			;
17439-96-5	<u>Manganese</u>		<u>ا ــــ</u>		
17439-97-6	Mercury	0.20	1 <u>U 1</u>		<u> </u>
17440-02-0	!Nickel	5.0	<u>: U:</u>		<u>    F                                 </u>
17440-09-7	Potassium	!	! <u>_</u> !	-	!
17782-49-2	Selenium_	1.8	1 B :		<u> </u>
17440-22-4	Silver	13.0_	<u> </u>		IP :
17440-23-5	Sodium	!	!		;
17440-28-0	Thallium	12.0	<u>: U :</u>	W	<u>    F     </u>
17440-62-2	!Vanadium	1	1_1		;
17440-66-6	Zinc	19.2	1 B !		<u>    F'     </u>
1	lCyanide	1	: <u>;</u>		!!
1	1	1	1_1		!!

lor Before: COLORLESS Clarity Before: CLEAR Texture:

dor After: COLORLESS Clarity After: CLEAR Artifacts:

mments:

CLIENT ID: PADW-1

## Organics Analysis Data Sheet

Lab Name: LAUCKS TESTING LABS

Collection Date: 07/11/96
Date Received: 07/15/96
Ext Started: 07/18/96
Ext Completed: 07/18/96
Ext Completed: 07/18/96
Date Analyzed: 07/18/96
Date Analyzed: 07/18/96
Date Confirmed: 07/18/96
Date Confirmed: 07/18/96
Dil Factor: 1.0
Percent Moist: 100

CAS No.	Compound		Resu	lt	SDL	
	Gasoline range	==	===== 250	===== U	250	
		'	İ		l	ı

## Fuel Hydrocarbons Data Sheet

Lab Name: Laucks Testing Labs, Inc.

Collection Date: 7/11/96

Lab Sample ID: 9607483-02

Date Recieved: 7/15/96

Client Sample ID: PADW-1

Matrix: WATER

Date Extracted: 7/16/96 Date Analyzed: 7/20/96

Reporting Units: mg/L

Sample Size(ml): 400

Time Analyzed: 11:41

Final Volume(ml): 2 Percent Moisture: 100

Dilution Factor: 1

Compound	Result	RL
Diesel	0.26	0.25
Motor Oil	1.0 U	1.0
Surrogate(s)	% Rec	Limits
2-Fluorobiphenyl	104	50 - 150
p-Terphenyl	112	50 - 150

RL = Reporting limit.

Comment The hydrocarbon pattern does not indicate diesel.

REPORT ON SAMPLE: 9607483-02C Client Sample ID: PADW-1

Collection Date : 07/11/96 Test Code : JP4W
Date Received : 07/15/96 Test Method : M8015
Date Analyzed : 07/25/96 Extraction Method : SW 3510
Date Prepared : 07/16/96

Analyte	Result (mg/L)	IDF	PQL (mg/L)
JP-4	0.25 U	1	0.25

Surrogate recovery report for sample 9607483-02C

	Percent	Limits:		
Surrogate	Recovery	Min.	Max.	
2-Fluorobiphenyl	92	50	150	

\* = Indicates that recovery is outside control limits

Comments:

## LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DCPW-1

Lab Name: Laucks Testing Labs

SDG No.: OP11X

Lab Sample ID: 9607483-01

Date Received: 07/15/96

Lab File ID:

U0723014.D

Date Analyzed: 07/23/96

Purge Vol:

25.0

ML

Dilution Factor: 20.0

CONCENTRATION

CAS NO.	COMPOUND	(ug/L)	Q
74-87-3	Chloromethane	20	U
75-01-4	Vinyl chloride	20	U
74-83-9	Bromomethane	20	U
75-00-3	Chloroethane	20	U
75-35-4	1,1-Dichloroethene	20	U
67-64-1	Acetone	6600	E
75-15-0	Carbon disulfide	20	U
75-09-2	Methylene chloride	4.8	JB
156-60-5	trans-1,2-Dichloroethene	20	<u> </u>
75-34-3	1.1-Dichloroethane	20	U
156-59-2	cis-1,2-Dichloroethene	20	U
78-93-3	2-Butanone	100	U
74-97-5	Bromochloromethane	20	U
67-66-3	Chloroform	20	U
107-06-2	1,2-Dichloroethane	20	U
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon tetrachloride	20	U
71-43-2	Benzene	20	U
79-01-6	Trichloroethene	20	U
78-87-5	1,2-Dichloropropane	20	U
75-27-4	Bromodichloromethane	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
108-10-1	4-Methyl-2-pentanone	100	U
108-88-3	Toluene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
79-00-5	1,1,2-Trichloroethane	20	U
127-18-4	Tetrachloroethene	20	U
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	20	U
106-93-4	1,2-Dibromoethane	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
100-42-5	Styrene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
75-25-2	Bromoform	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
95-50-1	1,2-Dichlorobenzene	20	U
96-12-8	1,2-Dibromo-3-chloropropane	20	U
1330-20-7	Xylene (total)	20	U

FORM I VOA

Form Ver. 1.0 4-22-96

#### 1E

## LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

DCPW-1

Laucks Testing Labs Lab Name:

SDG No.: OP11X

Matrix: (soil/water)

WATER

Date Received: 07/15/96

Lab Sample ID: 9607483-01

Date Analyzed: 07/23/96

Lab File ID:

U0723014.D

Dilution Factor: 20.0

Purge Voi:

(g/ml) ML 25.0

Number TICs found: EST. CONC. RT COMPOUND CAS NO. JN 1. 000067-63-c 1signpy/ Mothel 2.24

#### 1LCA LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

ML

SAMPLE NO.

DCPW-1DL

Lab Name: Laucks Testing Labs

SDG No.: OP11X

Lab Sample ID: 9607483-01DL

Date Received: 07/15/96

Lab File ID:

U0723016.D

Date Analyzed: 07/23/96

Purge Vol:

25.0

Dilution Factor: 100.0

CONCENTRATION

CAS NO.	COMPOUND	(ug/L)	Q	
	Chloromethane	100	U	
74-87-3	Vinyl chloride	100	<u> </u>	
75-01-4	Bromomethane	100	U	•
74-83-9		100	U	
75-00-3	Chloroethane	100	U	8/12/96 DE
75-35-4	1,1-Dichloroethene	8300	$\supset$	8 /14 De
67-64-1	Acetone	100	U	•
75-15-0	Carbon disulfide	45	JBD	8/17/96 200
75-09-2	Methylene chloride	100	U	
156-60-5	trans-1,2-Dichloroethene	100	Ū	<u>.</u>
75-34-3	1,1-Dichloroethane	100	Ū	1
156-59-2	cis-1,2-Dichloroethene	500	<u>U</u>	<del>-</del>
78-93-3	2-Butanone	100	<del>- ŭ</del>	Ī
74-97-5	Bromochloromethane	100	Ŭ	1
67-66-3	Chloroform	100	Ü	1
107-06-2	1,2-Dichloroethane	100	U	-i
71-55-6	1,1,1-Trichloroethane	100	U	†
56-23-5	Carbon tetrachloride	100	U	1
71-43-2	Benzene	100	U	1
79-01-6	Trichloroethene	100	Ū	┪
78-87-5	1,2-Dichloropropane		Ü	-
75-27-4	Bromodichloromethane	100	U	
10061-01-5	cis-1,3-Dichloropropene	100	U	-
108-10-1	4-Methyl-2-pentanone	500	U	-
108-88-3	Toluene	100		-
10061-02-6	trans-1,3-Dichloropropene	100	U	-
79-00-5	1,1,2-Trichloroethane	100		_
127-18-4	Tetrachloroethene	100	U	-
591-78-6	2-Hexanone	500	U	
124-48-1	Dibromochloromethane	100	U	_
106-93-4	1,2-Dibromoethane	100	U	-
108-90-7	Chlorobenzene	100	U	
100-41-4	Ethylbenzene	100	U	_
100-42-5	Styrene	100	U	_
79-34-5	1,1,2,2-Tetrachloroethane	100	U	_
75-25-2	Bromoform	100	l U	
541-73-1	1,3-Dichlorobenzene	100	U	
	1,4-Dichlorobenzene	100	U	
106-46-7 95-50-1	1,2-Dichlorobenzene	100	U	
	1,2-Dibromo-3-chloropropane	100	l U	
96-12-8	Xylene (total)	100	U	
1330-20-7	Viene (romi)			

FORM I VOA

Form Ver. 1.0 4-22-96

#### 1E LOW CONC. WATER VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

DCPW-1DL

Lab Name: Laucks Testing Labs

SDG No.: OP11X

Matrix: (soil/water)

WATER

Date Received: 07/15/96

Lab Sample ID: 9607483-01DL

Date Analyzed: 07/23/96

Lab File ID:

U0723016.D

Dilution Factor: 100.0

Purge Vol:

25.0

(g/ml) ML

Number TICs found:

,				1	ì
CAS NO.	COMPOUND	RT	EST. CONC.	Q	H
		2.20	1900	JN	:
1. 000067-63-	0 Isopropyl Alcohol				

#### 1B SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

Lab Name: Laucks	Testing Laboratory	Contract:	DCFW
Lab Code:	Case No.:	SAS No.: S	DG No.: OP11X
Matrix: (soil/water)	WATER	Lab Sample ID:	9607483-01
Sample wt/vol:	1000 (g/ml) ML	Lab File ID:	LU072404.D
Level: (low/med)	LOW	Date Received:	07/15/96
% Moisture:	decanted:(Y/N)	N Date Extracted:	07/16/96
Concentrated Extrac	t Volume: 1000 (uL)	Date Analyzed:	07/24/96
Injection Volume:	2.0 (uL)	Dilution Factor.	1.0
CDC Clossus: (V(N)	V nH: 9.3		

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q .
111-44-4	bis(2-Chloroethyl)ethe	er	10	U
108-95-2	Phenol		42	
95-57-8	2-Chlorophenol		10	U
541-73-1	1,3-Dichlorobenzene		10	<u> </u>
106-46-7	1,4-Dichlorobenzene		10	U
95-50-1	1,2-Dichlorobenzene		10	U
108-60-1	2,2'- oxybis(1-chlorop	ropane)	10	U
95-48-7	2-Methylphenol		10	U
67-72-1	Hexachloroethane	· · · · · · · · · · · · · · · · · · ·	10	<u> </u>
621-64-7	N-Nitroso-di-n-propyla	amine	10	U
106-44-5	4-Methylphenol	;	10	U
98-95-3	Nitrobenzene		10	U
78-59-1	Isophorone	· · · · · · · · · · · · · · · · · · ·	10	<u>U</u>
88-75-5	: 2-Nitrophenol		10	<u> </u>
105-67-9	2,4-Dimethylphenol	<u> </u>	10	<u>U</u>
111-91-1	bis(2-Chloroethoxy)m	nethane	10	U
120-83-2	; 2,4-Dichlorophenol		10	U
120-82-1	1,2,4-Trichlorobenzei	ne	10	U
91-20-3	Naphthalene		10	U
106-47-8	4-Chloroaniline		10	U
87-68-3	Hexachlorobutadiene		10	U
59-50-7	4-Chloro-3-methylpho		10	U
91-57-6	2-Methylnaphthalene		10	U
77-47-4	Hexachlorocyclopent		10	U
88-06-2	2,4,6-Trichloropheno		10	U
95-95-4	2,4,5-Trichloropheno		25	U
91-58-7	2-Chloronaphthalene	! <u>-</u>	10	_ <u>U</u>
88-74-4	2-Nitroaniline		25	<u>U</u>
208-96-8	Acenaphthylene		10	<u> </u>
131-11-3	Dimethylphthalate		10	<u>U</u>
606-20-2	2,6-Dinitrotoluene		10	<u>U</u>
83-32-9	Acenaphthene		10	U
99-09-2	3-Nitroaniline		25	<u>U</u>
51-28-5	2,4-Dinitrophenol		25	<u>U</u>
132-64-9				. <u>U</u>
121-14-2			<u> 10</u> _	<u> U</u>
100-02-7	4-Nitrophenol		25	<u> </u>

#### 1C SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

DCPW-1

Lab Name: Lauc	ks Testing Laboratory	Contract:	
	Case No.:	SAS No.: SI	OG No.: <u>OP11X</u>
Lab Code:		Lab Sample ID:	9607483-01
Matrix: (soil/water)	1000 (g/ml) ML	Lab File ID:	LU072404.D
Sample wt/vol:	1000 (g/////	Date Received:	07/15/96
Level: (low/med)	LOW	N Date Extracted:	07/16/96
% Moisture:	decanted:(Y/N)	Date Analyzed:	07/24/96
Concentrated Extr	act Volume: 1000 (uL)	Dilution Factor:	
Injection Volume:	2.0 (uL)	Dilution Pactor.	1.0
GPC Cleanup: (Y/	N) <u>Y</u> pH: <u>9.3</u>		

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
CAS 110.			10	U
86-73-7	Fluorene		10	U
7005-72-3	4-Chlorophenyl-pher	lyletner	10	U
84-66-2	Diethylphthalate		25	U
100-01-6	4-Nitroaniline		25	U
534-52-1	4.6-Dinitro-2-methyl	onenoi	10	U
86-30-6	n-Nitrosodiphenylam	nine	10	U
101-55-3	4-Bromophenyl-pher	nyletner	10	Ū
118-74-1	Hexachlorobenzene		25	U
87-86-5	Pentachlorophenol		10	U
85-01-8	Phenanthrene		10	U
120-12-7	Anthracene		10	U
86-74-8	Carbazole		1	J
84-74-2	<ul> <li>Di-n-butylphthalate</li> </ul>		10	Ū,
206-44-0	Fluoranthene		10	Ū
129-00-0	Pyrene		10	Ū
85-68-7	Butylbenzylphthalat	e	10	U
91-94-1	3,3'-Dichlorobenzid	ine	10	U
56-55-3	Benzo[a]anthracent	<u> </u>	10	U
218-01-9	Chrysene		28	В
117-81-7	bis(2-Ethylhexyl)ph	thalate	28	J
117-84-0	Di-n-octylphthalate		10	<del>U</del>
205-99-2	Benzo[b]fluoranthe	ne	10	U
207-08-9	Benzo[k]fluoranthe	ne	10	<del></del>
50-32-8	Benzo[a]pyrene		10	
193-39-5	Indeno[1,2,3-cd]py	rene	10	<del></del> U
53-70-3	Dibenz[a,h]anthrac	ene	10	<del></del>
191-24-2	Benzo[g,h,i]peryler	ne	10	

#### 1F

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

SAMPLE NO.

	_		DCPW-1
ab Name: Laucks	Testing Laboratory	Contract:	DCFW-1
.ab Code:	Case No.:	SAS No.: S	DG No.: OP11X
Matrix: (soil/water)	WATER	Lab Sample ID:	9607483-01
Sample wt/vol:	1000 (g/ml) <u>ML</u>	Lab File ID:	LU072404.D
evel: (low/med)	LOW	Date Received:	07/15/96
% Moisture:	decanted: (Y/N)	N Date Extracted:	07/16/96
Concentrated Extrac	t Volume: 1000 (uL)	Date Analyzed:	07/24/96
njection Volume: 2	1.0 (uL)	Dilution Factor.	1.0
GPC Cleanup: (Y/N)	Y pH: 9.3		

Number TICs found:	30 (	ug/L or ug/Kg)	UG/L		_
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1. 002313-65-7	2-Hexanol, 3-methyl-	8.00	1 3	JN	-
2.	unknown alcohol	8.09	5	JB	* 343#1 _
3. 000629-20-9	1,3,5,7-Cyclooctatetraene	8.61	6	JN	
4. 000111-76-2	Ethanol, 2-butoxy-	9.15	4	JN	_
5. 000110-13-4	2,5-Hexanedione	9.77	5	JN	-
6. 000100-52-7	Benzaldehyde	10.47	5	JN	
7. 020324-32-7	2-Propanol, 1-(2-methoxy-1-r	neth 11.54	2	JN	_
8. 013429-07-7	2-Propanol, 1-(2-methoxypro	poxy 11.85	2	JN	_
9. 000098-86-2	Acetophenone	12.95	16	JN	_
10.	unknown	13.94	4	J	_
11. 000149-57-5	Hexanoic acid, 2-ethyl-	14.43	4	JN	_
12. 000768-03-6	2-Propen-1-one, 1-phenyl-	14.86	4	JN	_
13.	unknown	15.51	6	J	_
14. 000579-07-7	1,2-Propanedione, 1-phenyl-	16.57	9	JN	
15. 000105-60-2	Caprolactam	17.09	2	JN	_
16. 000120-40-1	Dodecanamide, N,N-bis(2-hy	drox 22.20	36	JN	
17. 000134-81-6	Ethanedione, diphenyl-	26.41	6	JN	_
18. 000057-10-3	Hexadecanoic acid	27.67	6	JN	_
19.	unknown	27.82	5	J	_
20. 001501-05-9	Benzenepentanoic acid, .delt	ao 28.89	2	JN	_
21.	unknown	28.95	2	J	_
22. 000120-46-7	1,3-Propanedione, 1,3-dipher	nyl- 29.30	17	JN	_
23.	unknown	29.64	4	J	<del>-</del>
24. 000630-01-3	Hexacosane	31.60	3	JN	_
25.	unknown	33.48	4	J	_
26. 000593-49-7	Heptacosane	34.72	2	JN	_
27.	unknown	35.06	2	J	_
28.	unknown	35.33	5	.J	
29.	unknown	37.16	2	J	_
30.	unknown	45.67	4	J	-

#### U.S. EPA - CLP

## INORGANIC ANALYSIS DATA SHEET

EFA SAMFLE NO.

GDOPW1 :

: Name: LAUCKS TESTING LABS. INC. Contract:

o Code: LAUCKS Case No.: SAS No.: SDG No.: OF11X

trix (soil/water): WATER

Lab Sample ID: 07483-01

vel (low/med): LOW

Date Received: 07/15/96

30lids:

0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	   Analyte	Concentration		   Q 	M
7429-30-5	Aluminum		!	!	<u>i</u> i
17440-38-0		17.2			<u>!E_                                 </u>
17440-33-2			B		! <u>F</u>
	Barium	31.8			<u> </u>
17440-41-7	Beryllium		١ <u>U</u>		<u> </u>
17440-43-9		12.0_	١ <u>U</u>	<u>!</u>	<u> P_</u>
17440-70-2		1	١	<u>!</u>	<u>-</u>
17440-47-3	Chromium	124.3_	¦	!	<u> </u>
17440-48-4	Cobalt	1	!_	<u>!</u>	<u></u>
17440-50-8	(Copper	13.0	! B	<u> </u>	<u> </u>
:7439-89-6	Iron	1	١.,		<del> </del>
17439-92-1	Lead	11.0	١ <u>U</u>	<u> </u>	!F.!
17439-95-4	:Magnesium	!	. ! —	<u> </u>	<u>-</u> i
17439-96-5	Manganese			<u> </u>	ii
17439-97-6	Mercury	10.20	ιŲ		<u> </u>
17440-02-0	!Nickel	15.0	ΗŲ	<u>                                     </u>	!P!
17440-09-7	Potassium		. !	<u> </u>	<del></del> :
17782-49-2	Selenium	15.0	_   _		<u>iF_</u> i
17440-22-4	Silver	13.0	_ <u> </u>	<u> </u>	<u>!F</u> -!
17440-23-5	:Sodium	_	-! -	<del></del>	
17440-28-0	!Thallium	2.0	_ ! [	<u> </u>	
17440-62-2	Vanadium	<u> </u>	- ! -	<u> </u>	
17440-66-6	Zinc	126.2	_! -	<u>:</u>	<u> </u>
1	Cyanide	_	_! -	<u></u> -	<u>-</u> !
1	1	. !		_	ii

or Before: COLORLESS Clarity Before: CLEAR Texture:

or After: COLORLESS Clarity After: CLEAR Artifacts:

ments:

CLIENT ID: DCPW-1

#### Organics Analysis Data Sheet

Lab Name: LAUCKS TESTING LABS

Lab Sample ID : 9607483-01 Collection Date: 07/11/96 Client ID : DCPW-1

Date Received : 07/15/96 Ext Started : 07/18/96
Ext Completed : 07/18/96
Date Analyzed : 07/18/96
Date Confirmed : 07/18/96
Dil Factor : 1.0 Matrix : WATER Reporting Units: ug/L

Sample Size : 1.00 ml Final Ext Vol : 1.0

Percent Moist : 100

CAS No.	Compound	Result		SDL
	Gasoline range	250	==== U	====== 250

SDL = Sample Detection Limit

#### Fuel Hydrocarbons Data Sheet

Lab Name: Laucks Testing Labs, Inc.

Collection Date: 7/11/96

Lab Sample ID: 9607483-01

Date Recieved: 7/15/96

Client Sample ID: DCPW-1 Matrix: WATER

Reporting Units: mg/L

Date Extracted: 7/16/96

Date Analyzed: 7/20/96

Sample Size(ml): 400

Time Analyzed: 11:03

Final Volume(ml): 2 Percent Moisture: 100

Dilution Factor: 1

Compound	Result	RL
Diesel	0.39	0.25
Motor Oil	1.0 U	1.0
Surrogate(s)	% Rec	Limits
2-Fluorobiphenyl	103	50 - 150
p-Terphenyl	115	50 - 150

RL = Reporting limit.

Comment The hydrocarbon pattern does not indicate diesel.



Sal

MAILING ADDRESS: P.O. BOX 2003, MS-7606 OAK RIDGE, TN 37831-7606 EXPRESS ADDRESS:
TRI-COUNTY MALL
831 TRI-COUNTY BOULEVARD
OLIVER SPRINGS, TN 37840

TO:

FAX #:

**VERIFY#**:

OFFICE #:

Aimee Rynolds

101-444-1901

FROM:

Bill Hidlery

FAX #:

(423) 435-3269 (

VERIFY#: (投3) 435-3100 OFFICE #:

423-435-3572

THIS TRANSMITTAL CONSISTS OF 21 PAGES (EXCLUDING COVER SHEET)

COMMENTS:

9126/06

Aimee,

A hard copy will follow by regular mail. Planse let me troom it you forsee a problem.

B. W Halburg



July 1

MAILING ADDRESS: P.O. BOX 2003, MS-7606 OAK RIDGE, TN 37831-7606 EXPRESS ADDRESS:
TRI-COUNTY MALL
831 TRI-COUNTY BOULEVARD
OLIVER SPRINGS, TN 37840

TO:

FAX #:

**VERIFY #**:

OFFICE #:

Dave Dabs

406-771-0700

\_\_\_\_

FAX #:

VERIFY#:

OFFICE #:

Bill Hedberg

(423) 435-3269

(423) 435-3100

423-435-3572

THIS TRANSMITTAL CONSISTS OF 21 PAGES (EXCLUDING COVER SHEET)

COMMENTS:

9/26/16

Mr Dubbs

Jim Pearce supplied your name as the proon to direct this request to. A hard copy will follow by regular vail. Please let me those it you forsee a publican. Bill Halbery

LOCKHEED MARTIN ENERGY SYSTEMS

#### DEPARTMENT OF ENVIRONMENTAL QUALITY SUPERFUND SECTION



PHONE # (406) 444-1420

FAX # (406) 444-1901

OFFICE: LOCATION: Helena, MT

MAILING PO Box 200901 ADDRESS: Helena, MT 59620-0901

June 5, 1996

Fritz Lebow Lockheed Martin Energy Systems PO Box 2003 Oak Ridge, TN 37831-7606

Great Falls International Airport - Investigation-Derived Waste RE:

Dear Mr. Lebow:

I am writing this letter in response to your letter of May 23, 1996. Enclosed are four copies of your letter which appear to have been intended for your cc's and which I inadvertently received. The Montana Department of Environmental Quality (MDEQ) approves of your request to dispose of the contents of drums 1-4, 10-14, 16-18, 22-27, 31-45, 47-59, and 62-65 by spreading them at the area of the base previously designated by Major Johnson. MDEQ also approves of your request to dispose of drums 66, 67, 68, 71, and 72 as solid waste.

If you have any further questions, please feel free to call me.

Sincerely,

Aimee T. Reynolds **Environmental Scientist** 

Crime Keynolds

**CECRA Program** 

#### Lockheed Martin Energy Systems

Post Office Box 2003

Oak Ridge, Tennessee 37831 - 7606

Telephone: (423) 435-3257 Facsimile: (423) 435-3269



May 23, 1996

Ms. Aimee T. Reynolds State of Montana Department of Environmental Quality Superfund Section P.O. Box 200901 Helena, Montana 59620-0901

Dear Ms. Reynolds:

### Montana Air National Guard, Great Falls, Montana-Disposal of Investigation-Derived Waste

Per our meeting on Monday, May 13, 1996, at the Montana Air National Guard Base, Great Falls, I have enclosed a marked copy of the drum inventory list (May 21, 1996) of investigation-derived waste (see Enclosure 1). The drums marked with an asterisk contain rock cuttings and water generated during the drilling of bedrock groundwater monitoring wells. As a follow-up to your verbal approval during our meeting, we are requesting your written confirmation to dispose of the contents of these drums by spreading them at the area of the base previously designated by Major Iver Johnson. These drums are itemized as follows: drums 1-4, 10-14, 16-18, 22-27, 31-45, 47-59, and 62-65.

The only analytical data available from the rock cuttings are from samples taken at the 20-ft interval on the wells where surface casings were set. The purpose for setting the surface casings at these specific locations was to rule out the potential for any vertical cross contamination. These laboratory data (see Enclosure 2) indicate that low levels of the common laboratory contaminants methylene chloride, acetone, 2-butanone, and 2-hexanone and very low levels of xylene, toluene, 4-methyl-2-pentanone, and carbon disulfide are present.

As mentioned during our meeting, the marked drums contain the cuttings generated during the air drilling of bedrock sandstones to install the groundwater monitoring wells. Because the Air National Guard Readiness Center's policy is to avoid installing monitoring wells in source areas of contamination, all the wells were installed either upgradient or downgradient from any potential area of soil/bedrock contamination as previously defined during the Site Investigation. The water contained in some of the marked drums is potable water from the base that was added to clean up the walls of the drill holes to enable better recharge of the wells, this water (about 35 gal/hole) was recovered and drummed.

In addition to the drums marked with an asterisk, we are also requesting your approval to dispose of drums 66, 67, 68, 71, and 72 through the existing waste disposal mechanism at the base. These drums contain solid waste such as personal protective equipment, clothing, waste bailers, gloves, and rope.

Disposition of the contents of the remaining drums, which contain cuttings from soil borings, the containerized water from monitoring wells development and purging operations, and wastes generated during decontamination operations, will depend upon the results of ongoing and planned fixed-base laboratory analyses.

Ms. Aimee T. Reynolds Page 2 May 22, 1996

Thank you for your assistance in this matter. Bill Hedberg and I certainly enjoyed meeting with you, and we look forward to working with you and other state officials in the future.

Sincerely,

F. E. Lebow, Project Manager

Hazardous Waste Remedial Actions Program

FEL:bnb

**Enclosures** 

c: D. Bunn (OpTech)

G. F. Delong

M. Frey (ANGRC)

W. H. Hedberg

I. Johnson (Montana ANG)

T. Neuman (Montana ANG)

File-RC

#### Drum Inventory (5/21/96) at Montana Air National Guard Great Falls, Montana Remedial Investigation Field Activity

Drum No.	Soil Boring/MW Location	Drum Content	<u>Date</u>
1*	8-MW3	Soil cutting (0-20')	5/2/96
2*	8-MW3	Soil cutting (20-40')	5/2/96
3*	8-MW3	Soil cutting (40-65')	5/2/96
3** 4*	8-MW3	Soil cutting + water	5/2/96
5	8-SB7	Soil cutting	4/25/96
5 6	8-SB6	Soil cutting	4/25/96
7	1-8-SB8	Soil cutting	4/25/96
8	8-SB9	Soil cutting	4/30/96
	8-SB10	Soil cutting	4/30/96
9	6-MW3	Cutting + water(25-41')	4/30/96
10*	6-MW3	Soil cutting (20-25')	4/30/96
11* 12*	6-MW3	Cutting + water	4/30/96
13*	6-MW3	Cutting + water(56-65')	4/30/96
14*	6-MW3	Soil cutting(41-56')	4/30/96
15	6-SB16	Soil cutting	4/30/96
15 16*	6-MW2	Soil cutting(20-28')	4/30/96
10 17*	6-MW2	Soil cutting(0-20')	4/29/96
18*	6-MW2	Soil cutting(28-50')	4/30/96
19	6-SB15	Soil cutting	4/26/96
20	6-SB17	Soil cutting	4/26/96
21	6-SB18	Soil cutting	4/26/96
22*	6-MW2	Soil cutting(0-20')	4/29/96
23*	6-MW3	Soil cutting(0-10')	4/29/96
24*	6-MW3	Soil cutting(10-20')	4/29/96
25*	6-MW2	cutting + water(60-65')	4/30/96
26*	6-MW2	Soil cutting(50-60')	4/30/96
27*	7-MW5	Soil cutting(20-35')	4/29/96
28	7-SB7	Soil cutting	4/27/96
26 29	7-SB5	Soil cutting	4/27/96
30	7-SB6	Soil cutting	4/27/96
30 31*	7-MW2	Soil cutting(0-20')	4/28/96
32*	7-MW5	Soil cutting(0-10')	4/28/96
32* 33*	7-MW5	Soil cutting(10-20').	4/28/96
33* 34*	7-MW4	Soil cutting(0-10')	4/28/96
35*	7-MW4	Soil cutting(10-20')	4/28/96
35** 36*	7-MW4	Soil cutting(40-55')	5/1/96
30* 37*	7-MW2	Soil cutting(0-20')	4/28/96
38*	7-MW5	Soil cutting(55-80')	4/29/96
39*	7-MW5	Soil cutting(80-82')	4/29/96
39* 40*	7-MW5	Soil cutting(35-55')	4/29/96
41*	7-MW4	Soil cutting(55-71')	5/1/96
42*	7-MW4	Cutting + water	5/1/96
42** 43*	7-MW4 7-MW4	Soil cutting(20-40')	5/1/96
45"	1 -TAT 44 -A	- · · · · · ·	

44*	7-MW3	Soil cutting(0-35')	5/1/96
45*	7-MW3	Soil cutting(35-70')	5/1/96
46	6-DW1	Soil cutting	4/27/96
47 <b>*</b>	7-MW2	Soil cutting(20-33')	5/1/96
48*	7-MW2	Soil cutting(47-59')	5/1/96
49*	7-MW2	Soil cutting(59-70')	5/1/96
50*	7-MW2	Soil cutting(33-47')	5/1/96
50 51*	8-MW4	cutting + water	5/2/96
52*	8-MW4	Soil cutting(0-40')	5/2/96
53*	8-MW4	Soil cutting(40-65')	5/2/96
54*	8-MW4	Cutting + water	5/2/96
55*	8-MW2	Soil cutting(0-30')	5/2/96
56*	8-MW2	Soil cutting(30-40')	5/2/96
57*	8-MW2	Soil cutting(40-65')	5/2/96
58*	8-MW2	cutting + water	5/2/96
59*	8-MW4	cutting + water	5/8/96
60	NA	Mud/decon pad	5/9/96
61	NA NA	Mud/decon pad	5/9/96
62*	1-MW2	Soil cutting(0-48')	5/1/96
63*	1-MW2	Soil cutting(48-68')	5/1/96
64*	1-MW2	Soil cutting(68-70')	5/1/96
65*	1-MW2	Cutting + water	5/1/96
66	NA	Solid waste	4/23/96
67	NA NA	Solid waste	4/28/96
68	NA NA	Solid waste	5/10/96
69	7-DW1	Soil cutting	4/27/96
70	NA NA	Mud from decon, pad	5/9/96
70 71	NA NA	PPE	5/16/96
72	NA NA	PPE	5/16/96
73	NA	Empty	5/16/96
74	NA	Empty	5/18/96

Signed Michael M. Ghazizadeh, Ph.D., CPG Operational Technologies Corporation MANG Site Manager

cc: David Bunn, OpTech
Fritz Lebow, HAZWRAP MANG Proj. Manager.
Proj. File(RC)-1083

# Laucks Testing Laboratories, Inc.

940 South Harney St. Seattle, WA 98108 (206) 767-5060 FAX (206) 767-5063

#### **FAX Cover Sheet**

Tos	Paula Watts	FAX Number: Date:	423-483-2800
Company:	Optech	Dates	
	Kathy Kreps	No. of Pages (including cover page):	7

Following are facsimile sample results for the following:

Laucks Sample #	OPTECH Sample #	
9605104-01	6-MWZ-20	(Check here [Zif VOCs only)
9605704-02	6-MW3-205	(Check here 13 if VOCs only)
" - 03	7-MWZ-20.5	(Check here [Tif VOCs only)
· - 04	7-MW4-20.5	(Check here [] if VOCs only)
" - 05	7-MW5-70.5	(Check here [Fif VOCs only)
		(Check here [] if VOCs only)
		(Check here □ if VOCs only)

Sample 96 05704-02 yielded fow intrad Standard arege due to possible matix interference. Re-analysis will be performed.

RES\_FX.DOC

#### VOLATILE ORGANICS ANALYSIS DATA SHEET

VBLK591

SAMPLE NO.

Lab Name: LAUCKS TESTING LABS Contract:

Lab Code: LAUCKS Case No.: SAS No.: SDG No.: OP01X

Matrix: (soil/water) SOIL

Lab Sample ID: B0506MVOSF1

Sample wt/vol: 5.00 (g/mL) G Lab File ID: F0506007.D

Level: (low/med) LOW

Date Received:

% Moisture: not dec.

Date Analyzed: 05/06/96

GC Column: D8-624 ID: 0.53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO. COMPOUND	(ug/L or ug/Kg) UG/KG	0

CHS RO.	COMPOUND (MAYE OF MA	,,	
74-87-3	Chloromethane	10	¦ U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Chloroethane Methylene Chloride	1	J
67-64-1	Acetone Carbon Disulfide	. 2	J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1.1-Dichloroethane	10	U
540-59-0	1.2-Dichloroethene (total)	; 10	¦ U
67-66-3	Chloroform	! 10	ľυ
107-06-2	1,2-Dichloroethane	_; 10)	U
78-93-3	2-Butanone	10	¦ U
71-55-6	1,1,1-Trichloroethane	10	¦ U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	Ü
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1.3-Dichloropropene	! 10!	Ų
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	ีย
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	8enzene	10	U
10061-02-6		10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	ี บ
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Styrene Xylene (total)	10	U
		i 	

VOLATILE ORGANICS ANALYSIS DATA SHEET

16-HW2-20

Lab Name: LAUCKS TESTING LABS

Contract:

SAMPLE NO.

Lab Code: LAUCKS Case No.:

SAS No.:

SDG No.: OPO4X

Matrix: (soil/water) SOIL

Lab Sample ID: 9605104-01

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: F0506009.D

Level: (low/med) LOW

Date Received: 05/04/96

% Moisture: not dec.

Date Analyzed: 05/06/96

GC Column: DB-624 ID: 0.53(mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume:

(uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND (ug/L or ug/Kg) UG	S/KG	Q
74-87-3	Chloromethane	10	
74-83-9	Bromomethanei	10	
75-01-4	Vinyl Chloride	10	
75_00-3	Chloroethane	10	
75-09-2	Methylene Chloride	2	JB
47_4A_1	Acetone	11;	В
75-15-0	Carbon Disulfide	1	J
75-35-4	1,1-Dichloroethene	10	U
75-24-2	1_1-nichloroethanei	10	U
E40-59-0	1,2-Dichloroethene (total)	10	Ų
47-44-3	Chloroform	10	U
107-06-3	1,2-Dichloroethane	10	
70-92-2	2-Butanone	2	J
70-73-3	2-Butanone	10	บ
71-33-6	Carbon Tetrachloride	10¦	U
75 -77 - 4	Bromodichloromethane	10¦	U
70 07 \$	1,2-Dichloropropane	10;	U
100/1-01-5	cis-1,3-Dichloropropene	10;	U
70.01-01-3	Trichloroethene	10;	U
/7~V1~6~~~~	Bibromochloromethane	10	U
124-48-1	1,1,2-Trichloroethane	10;	ប
79-00-3	Benzene	10;	U
/1-43-2	trans-1,3-Dichloropropene	10	U
10061-05-8		10	U
/5-25-2	Bromoform	10	U
108-10-1	2-Hexanone	10	U
591-/8-6	Tetrachloroethene	10	U
12/-18-4	1,1,2,2-Tetrachlorogthang	10	U
79-34-5	Tolund	10	U
108-88-3	Toluene	10	
108-90-/	Chlorobenzene	10	U
100-41-4	Et hylbenzene	10	Ū
100-42-5	Styrene	10	υ
1330-20-7	Xylene (total)	20	
 	- Spillith Court	<del></del>	

3/90

6-MW3-20.5

Lab Name: LAUCKS TESTING LABS Contract:

Lab Code: LAUCKS Case No.: \$AS No.:

SDG No.: OPO4X

Matrix: (soil/water) SOIL

| Lab Sample ID: 9605104-02

Sample wt/vol: 5.00 (g/mL) G Lab File ID: F0506010.D

Level: (low/med) LOW

Date Received: 05/04/96

\* Moisture: not dec.

Date Apalyzed: 05/06/96

GC Column: DB-624 ID: 0.53(mm) Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CAS NO. COMPOUND	(ug/L or ug/Kg) UG/KG	Q

CHS NO.	COTIF COND (E	gre or agring, odrina		-
74-87-3	Chloromethane		10	U
	Bromomethane		10;	บ
75-01-4	Vinyl Chloride		10	U
			10	IJ
75-09-2	Chloroethane Methylene Chloride_		2	JB
67-64-1			19	В
75-15-0	Carbon Disulfide		1	J
	1,1-Dichloroethene_		10	U
	1,1-Dichloroethane_		10	บ
540-59-0	1,2-Dichloroethene	(total)	10	U
67-66-3	Chloroform	7	10	υ
107-06-2	1,2-Dichloroethane_		10	U
	2-Butanone		10	U
71-55-6	1.1.1-Trichloroetha	ne	10	IJ
56-23-5	1,1,1-Trichloroetha Carbon Tetrachlorid	6	10	ប
75-27-4	Bromodichloromethan	e	10	U
	1,2-Dichloropropane		10	U
10061-01-5	cis-1,3-Dichloropro	pene	10	U
79-01-6	Trichloroethene	il k : 1	10;	U
124-48-1	Trichloroethene Dibromochloromethan	0	10;	U
79-00-5	1,1,2-Trichloroetha	ne	10	U
			10;	U
10061-02-6	Benzene trans-1,3-Dichlorop	ropene	10	U
75-25-2	Brosofors	'PT'.	10	U
108-10-1	4-Methyl-2-Pentanon	B	10	U
591-78-6	2-Hexanone		10	U
	Tetrachloroethene_		10	U
	1,1,2,2-Tetrachlorp	ethane	10	U
108-88-3	Toluene		10	U
	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
100-42-5	Styrene		10	U
	Xylene (total)		1	
			i	
	······································	L. C. A. C. B. C.		

## VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

Lab Name: LAUCKS TESTING LABS

Contract:

Lab Code: LAUCKS Case No.:

SAS No.:

SDG No.: OPO4X

Matrix: (soil/water) SOIL

Lab Sample ID: 9605104-03

Sample wt/vol: 5.00 (g/mL) G

Lab File ID: F0506011.D

Level: (low/med) LOW

Date Received: 05/04/96

% Moisture: not dec.

Date Analyzed: 05/06/96

GC Column: DB-624 ID: 0.53(mm)

Dilution Factor: 1.0

Soil Extract Volume:

(uL)

Soil Aliquot Volume:

(uL)

	CONCENTRATION UNIT	3.
CAS NO.	COMPOUND (max) or maxka)	JG/KG I
74-87-3	Chloromethane	10¦ U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	2, JB
67-64-1	Acetone	17 B
75-15-0	Carbon Disulfide	1¦ J
75-35-4	1,1-Dichloroethene	10¦ U
75-24-2	1 1-Nichloroethane	10¦ U
540-59-0	1,2-Dichloroethene (total)	10¦ U
67-66-3	Chioroform	10¦ U
107-06-2	1,2-Dichloroethane	10¦ U
78-93-3	2-Butanone	1¦ J
71-55-6	1,1,1-Trichlorogthane	10¦ ម
56-23-5	Carbon Tetrachloride	10¦ U
75-27-4	Bromodichloromethane	10, 8
78-87-5	1,2-Dichloropropane	10   บ
10061-01-5	cis-1,3-Dichloropropene	10¦ U
79-01-6	Trichloroethene	10 ¦ U
124-48-1	Dibromochloromethane	10; U
79-00-5	1,1,2-Trichlorog hane	10¦ U
71-43-2	Benzene	10¦ U
10041-02-6	trans-1,3-Dichloropropene	10¦ U
75-25-2	Bronoforn	10¦ U
108-10-1	4-Met hyl-2-Pentanone	10¦ U
591-78-6	2-Hexanone	10¦ U
127-18-4	Tetrachloroethene	10¦ U
70-24-5	1,1,2,2-Tetrachloroethane	10¦ U
100-00-2	Toluene	1¦ J
	Chlorobenzene	10¦ U
100-70-7	Ethylbenzene	10¦ U
	Styrene	10 U
100-42-0	Xylene (total)	1¦ J

#### VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

7-HW4-20.5

Lab Name: LAUCKS TESTING LABS

Lab Code: LAUCKS Case No.:

Contract:

SDG No.: OPO4X

SĄS No.:

Matrix: (soil/water) SOIL

Lab Sample ID: 9605104-04

Sample wt/vol: 5.00 (g/mL) G Lab File ID: F0506012.D

Level: (low/med) LOW

pate Received: 05/04/96

% Moisture: not dec.

Date Analyzed: 05/06/96

GC Column: D8-624 IO: 0.53(mm) Qilution Factor:

Soil Extract Volume:

(uL)

Soil Aliquot Volume:

(uL)

	CONCENTRA	TION UNITS:	
CAS NO.	COMPOUND (49/L or	ug/Kg) UG/KG	Q
74-87-3	Chloromethane	•	o¦ u
74-83-9	Bromomethane	10	a¦ U
75-01-4	Vinyl Chloride	10	ט וָס
75-00-3	Chloroethane	10	); U
75-09-2	Methylene Chloride	1	Z¦ JB
	Acetone	61	8
75-15-0	Carbon Disulfide		1; J
75-35-4	1,1-Dichloroetheme	10	ט¦ט
75-34-3	1,1-Dichloroethane		υ¦ο
540-59-0	1,2-Bichloroetheng (total	);	υ¦c
67-66-3	Chloroform	10	ט¦ט
107-06-2	1,2-Dichloroethane	10	o¦ U
78-93-3	2-Butanone	I	9¦
71-55-6	1,1,1-Trichloroethane	10	o¦ ย
56-23-5	Carbon Tetrachloride	;	o¦ u
	Bromodichloromethane		ว เ
78-87-5	1,2-Bichloropropane		o¦ U
10061-01-5	cis-1,3-Dichloropropens	10	บ¦บ
79-01-6	Trichloroethene		ט¦ ט
	Dibromochlorpmethane	10	טוכ
79-00-5	1,1,2-Trichloroet name	10	ט וֹכ
71-42-2	Qanzona ' II		ว เ
10061-02-6	trans-1,3-Aichlarapropene	10	υic
/5-25-2	Bronotora	10	υŀ
108-10-1	4-Methyl-2-Pentangge		5 i J
591-78-6	2-Hexanone	1.	4 !
	Tetrachlorgethene	·	บ่
79-34-5	1,1,2,2-Tetrachloroethane	10	οÙυ
	Toluene		ijĴ
	Chlorobenzane	Total Control of Contr	ט נס
100-41-4	Ethylbenzena		ט וֹכ
100-42-5	Styrene	<del></del> '	υ
	Xylene (total)		) U
AUGU EU I	" (		•

1A VOLATILE ORGANICS ANALYSIS PATA SHEET

17-HW5-20.5

SAMPLE NO.

Lab Name: LAUCKS TESTING LABS

Contract:

Lab Code: LAUCKS Case No.:

SAS No.:

SDG No.: OPO4X

Matrix: (soil/water) SOIL

Lab Sample ID: 9605104-05

Sample wt/vol:

5.00 (g/mL) G

Lab File ID: F0506013.D

Level: (low/med) LOW

pate Received: 05/04/96

% Moisture: not dec.

Date Analyzed: 05/06/96

GC Column: DB-624

ID: 0.53(mm)

Dilution Factor: 1.0

Soil Extract Volume:

(uL)

Spil Aliquot Volume:

(uL)

_	

		CONCENTRATION UNITS:			
CAS NO.	COMPOUND	Hug/L or ug/Kg	) UG/KG	Ď	
	Chloromethane_		10		
74-83-9	Bromomethane	<u> </u>	10		
75-01-4	Vinyl Chloride_		10;	U	
	5-00-3Chloroethane		10;	U	
75-09-2	19-2Methylene Chloride		2¦	JВ	
67-64-1	Acetone		20	В	
75-15-0	Carbon Disulfid	e	10	U	
75-35-4	1,1-Dichloroeth	ena :	10	U	
75-34-3	1.1-Dichloroeth	ane :	10	U	
540-59-0	1,2-Dichloroeth	ene (total)	10	U	
67-66-3	Chloroform		10	U	
	1,2-Dichloroeth	ane	10	U	
	2-But anone		2	J	
	1,1,1-Trichloro	ethane	10	U	
	Carbon Tetrachl		10	Ũ	
	Bromodichlorome		10	_	
70-07-5	1,2-Dichloropro	Dane	10	_	
10041-01-5	cis-1,3-Bichlor	odronene	10	-	
70-01-01-3	Trichloroethene	off phene	10	-	
	Dibromochlorome		10	-	
	1,1,2-Trichloro		10	-	
77-00-3	Benzens	avilane	10:	_	
100/1 00 /	trans-1,3-Dichl		10	-	
10061-05-6	Bromoform	of obt obeits!	10:	-	
100 10 1	4-Methyl-2-Pent		10!	บ ป	
108-10-1	4-nethy1-2-pent	anone	10	-	
591-/8-6	2-Hexangne		10;	_	
12/-18-4	TetrachLoroethe	118	10;	-	
	1,1,2,2+Tetrach	Torostnane		U	
	Toluene		10	_	
108-90-7	Chlorobenzene		10;	-	
100-41-4	Ethylbenzene		10	-	
100-42-5	Styrene		10		
1330-20-7	Xylene (total)_		1;	J	

## APPENDIX K JP4/JP8 CHROMATOGRAMS

### Laucks

Great galls

Testing Laboratories, Inc.

940 South Harney St. . Seattle, WA 98108 (206) 767-5060 FAX (206) 767-5063 Free Parlack report

### **FAX Cover Sheet**

Company: Optech From: Kathy Kreps

To: Paula Watts

FAX Number: 423-483-2800 No. of Pages

(including cover

Date: 28 May 26

Following are facsimile sample results for the following:

JP4/JP8

Laucks Sample #	OPTECH Sample #	
		(Check here [] if VOCs only)
9605399-61	7-MWI-FP	(Check here T if VOCs only)
		(Check here [] if VOCs only)
		(Check here [] if VOCs only)
		(Check here T if VOCs only)
		(Check here [] if VOCs only)
		(Check here : if VOCs only)
	<del></del>	

+ chromatograms of the sample, JP4 standard & JP8 Standard:

REPORT ON SAMPLE: 9605399-01A Client Sample ID: 7-MW1-FP

> Collection Date : 05/13/96 Date Received : 05/14/96

Date Analyzed : N/A

Prep Date

Test Code :

: JD8W JP4W. : M8015 ALM

Test Method : M8015 Extraction Method : SW 3510

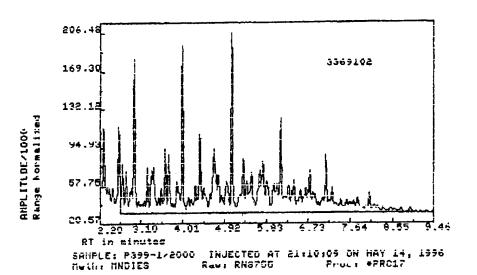
Analyte	Result (mg/L)	PQL (mg/L)
JP-84 AEMSTERLO	970000 D	100000

Surrogate recovery report for sample 9605399-01A

Surrogate	Percent	Limi	ts:
	Recovery	Min.	Max.
2-Fluorobiphenyl	0 *	50	150

\* = Indicates that recovery is outside control limits

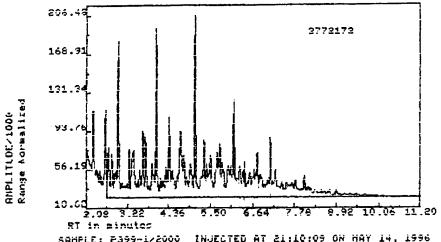
Comments: This sample has a JP4 pattern. Surrogate recovery could not be calculated due to dilution.



Gyle JPV roje

SAMPLE # 7-MW1-FP 9605399-Ø1

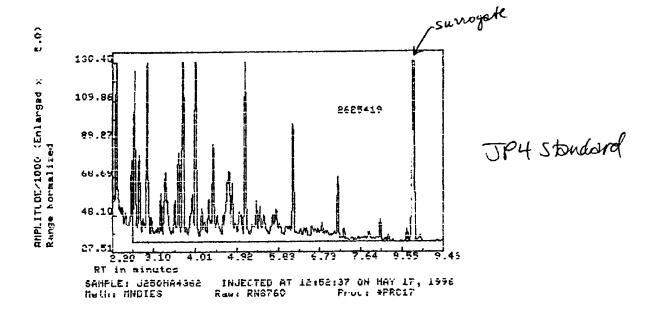
(JP 4 Range)



Exple. JP8 raje

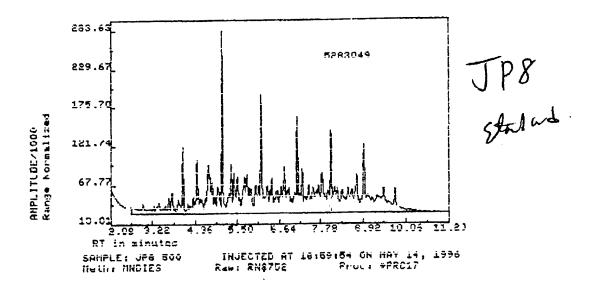
SAMPLE: P399-1/2000 INJECTED AT 21:10:09 ON HAY 14, 1996 Neth MNDIES Rami RMB705 Proc: #PRC17

SAMPLE # 7-MWI-FP 9605399-01 (JP8 RANGE)



JP4 STANDARD (JP4 RANGE)

2200 .0. 2000



JP8 STANDARD (JP8 RANGE)

### APPENDIX L

### FEDERAL DRINKING WATER STANDARDS

And

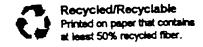
MONTANA NUMERIC WATER QUALITY STANDARDS

### DRINKING WATER REGULATIONS AND HEALTH ADVISORIES

by

Office of Water
U.S. Environmental Protection Agency
Washington, D.C.

February 1996



These regulations and health advisory tables are revised every 6 months by EPA's Office of Water. Although no permanent mailing list is kept, copies may be ordered free of charge from the:

SAFE DRINKING WATER HOTLINE

1-800-426-4791

Monday thru Friday, 9:00 AM to 5:30 PM EST.

Copies of the supportive technical documentation for the health advisories can be obtained for a fee from the:

Educational Resource Information Center (ERIC)

1929 Kenny Road

Columbus, OH 43210-1080

Telephone number (614) 292-6717

FAX (614) 292-0263

e-mail ERICSE@osu.edu

Payment by Purchase Order/check/Visa or Mastercard.

The Health Advisories available and their ERIC order numbers are included at the end of this publication. For further information regarding the Drinking Water Regulations and Health Advisories, call Barbara Corcoran in EPA's Office of Water at (202) 260-1332.

### **LEGEND**

### Abbreviations column descriptions are:

MCLG - Maximum Contaminant Level Goal. A non-enforceable concentration of a drinking water contaminant that is protective of adverse human health effects and allows an adequate margin of safety.

MCL - Maximum Contaminant Level. Maximum permissible level of a contaminant in water which is delivered to any user of a public water system.

RfD - Reference Dose. An estimate of a daily exposure to the human population that is likely to be without appreciable risk of deleterious effects over a lifetime.

Drinking Water Equivalent Level. A lifetime exposure concentration protective of adverse, non-cancer health effects, that assumes all of the exposure to a contaminant is from a drinking water source.

(\*) The codes for the Status Reg and Status HA columns are as follows:

F - final

D - draft

L - listed for regulation

P - proposed

T - tentative (not officially proposed)

Other codes found in the table include the following:

NA - not applicable

PS - performance standard 0.5 NTU - 1.0 NTU

TT - treatment technique

No more than 5% of the samples per month may be positive. For systems collecting fewer than 40 samples/month, no more than 1 sample per month may be positive.

\*\*\* - guidance

Large discrepancies between Lifetime and Longer-term HA values may occur because of the Agency's conservative policies, especially with regard to carcinogenicity, relative source contribution, and less-than-lifetime exposures in chronic toxicity testing. These factors can result in a cumulative UF (uncertainty factor) of up to 5 to 5000 when calculating a Lifetime HA.

The scheme for categorizing chemicals according to their carcinogenic potential is as follows: \*

### Group A: Human carcinogen

Sufficient evidence in epidemiologic studies to support causal association between exposure and cancer

### Group B: Probable human carcinogen

Limited evidence in epidemiologic studies (Group B1) and/or sufficient evidence from animal studies (Group B2)

### Group C: Possible human carcinogen

Limited evidence from animal studies and inadequate or no data in humans

### Group D: Not classifiable

Inadequate or no human and animal evidence of carcinogenicity

### Group E: No evidence of carcinogenicity for humans

No evidence of carcinogenicity in at least two adequate animal tests in different species or in adequate epidemiologic and animal studies

Drinking Water Health Advisories (HAs) are defined as follows:

### One-day HA

The concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects for up to 5 consecutive days of exposure, with a margin of safety.

### Ten-day HA

The concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects up to 14 consecutive days of exposure, with a margin of safety.

### Long-term HA

The concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects up to approximately 7 years (10% of an individual's lifetime) of exposure, with a margin of safety.

\*EPA is in the process of revising the Cancer Guidelines.

### Lifetime HA

The concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects over a lifetime of exposure, with a margin of safety.

Longer (month) (month)	0.00
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NOTE: Anthracene and Benzo(g,h,l)perylene — not proposed in Phase V. NOTE: Changes from the last version are noted in Italic and Bold Face print.

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Current MCL. "A HA will not be developed due to insufficient data; a "Database Deficiency Report has been published.
 1994 Proposed rule for Disinfection By-products: Total for all THMs combined cannot exceed the 0.08 level.
 Total for all haloscetic acids cannot exceed 0.08 level. "PAE = phthalata acid ester." "Draft HA updated for the Phase VIB regulation, which has been postponed. It includes the change of the cancer classification from D to C, thus justifying the use of an additional 10-fold saffy factor for the lifetime HA.

November 1995

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The values for m-dichlorobenzene are besed on deta for o-dichlorobenzene.
 A quantitative risk estimate has not been determined.
 Total for all haloacetic acids cannot exceed 0.08 level.

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<sup>•</sup> An HA will not be developed due to insufficient data; a "Database Deficiency Report" has been published. •• tg = technical grade

November 1995

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••• Carchogenicity based on inhalation exposure.
••• See 40CFR Parts 141 and 142

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Polychiorinated biphenyla	L	Zero 0.0005	۵	•	ŧ	•	•	•	•	•,	0.000	22
(PCBs)	_		**	20	£0	0.2		5.64.8*	THE SECTION			n n
Pronamide			m 4	0.8	0.8	0.8	3	0.075		800	HAWATA WATER	
Proparine Proparing Propar			T. 4			0.5	2	20.02	0.7	0.04		ပ
Propybenzene n-			٥					Manual States				TEN PER SE
			. u		0.1	0.1	0.4	0.00 0.00	0.1	3	0.0	U
Surregion		1,000 10 10 10 10 10 10 10 10 10 10 10 10			ومداللالالوم	0.07	III O OLI	9000				
Styrene Styrene	F	0.1	T 31	8	2	2 With With		0.2 6.4		0.1		
2,3,7,8-TCDD (Dloodn)	Ŧ	zero 3E-08	F	1E-08	1E-07	1E-08	4E-08	1E-09	4E-08		2E-08	B2
<ul> <li>Under review. NOTE: Phenanthrens — not proposed.</li> <li>The RfD for metribuzin was revised Dec. 1994 to 0.013 mg/kg/day. Based on information has not been incorporated in the Health Advisory document.</li> <li>Tentative.</li> </ul>	hrene — no ted Dec. 191 ted in the He	x proposed. 194 to 0.013 mg/kg/day. eaith Advisory docume		His revised R	this revised RfD the Lifetime HA would be 0.1 mg/l i	HA would b	• 0.1 mg/l se	peuming a X	20% relative ec	surce contribution	on for drhydng w	. 74 14 14
• K the remove cleanification C is so	cepted, the	uffication C is accepted, the Lifetime HA is 0.20; other wise it is	her Wise R R	10.200 mg/L								

<sup>•</sup> If the cancer cleasification C is accepted, the Lifetime HA is 0.20; other wise it is 0.200 mg/L

	Standards			Health Advisores		
Chemicals			10-kg Child		Josephy Mark	
	Birtus MCLG MCL Reg. (mg/l) (mg/l)		One-day Ten-day bern (mail (mail) (mail)			
Tebuthkron		пв	3	0.07 0.013	0.2 0.5	O I
		u lu	0.005 0.005 0.001	0.005 0.00013 0		00
	900.0	ىد م		9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	de mariement der	
		: 4.	<b>3</b>			. a
2	F zero 0.003	r ir	0.2 0.2	6.5 0.0078		20
toro-1,2,2- hene	* M. W.					. 0
Trichloroscetostile		۵۵.	- 900 900 - 900 900			. 0
Trichlorbenzene (1,2,4-) Trichlorbenzene (1,3,5-)	0.07 U.O.	T T	9.0	2 0.006		00
Tricklorestrane (1,12-)	F 0.003 0.005	u,	¥.0	10000		O
Trichloroethylene	F 2010 0.005					22
Trichioropropare (1,1,1-)		<b>3</b>	90 90 00	6000		. 22
Triffication (1.2.4)		<b>.</b> 0	200			
Trimethytbenzene (1,3.5-)		ا عد م		1 COOS		
Trintrotoluene Vinyl Chloride	2	T. IL. (	0,02 0,02 3 0,00 3 0,00			Y
Xylenes	10 10		OF 09	<b>3</b>		

Under review.
 A HA will not be developed due to insufficient data; a "Database Deficiency Report" has been published.
 Total for all haloscetic acids cannot exceed 0.08 mg/l level.

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	TO MFL TO MFL 0.0000
	3.44
	0.000 0.01 0.000 0.01 0.000 0.2 0.000 0.2 0.000 0.3 0.000 0.3 0.000 0.3 0.000 0.3 0.14* 0.14* 0.14* 0.14* 0.14* 0.14* 0.14* 0.000 0.2 0.000 0.2 0.14* 0.14* 0.14* 0.14* 0.14* 0.14* 0.14* 0.14* 0.14* 0.14* 0.14* 0.14* 0.14* 0.14* 0.14* 0.14* 0.14* 0.14* 0.000
	2005 2002 2002 2003 2003 2003 2003 2003
Consultation (mode)	30 30 4 (100) (100) 1 (100) (100)
J.	
MCLG (mg/l)	0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.0000 0.0000
Burtus Ragio	
	INORGANICS  Auminum Antimoria Antimory Antimory Antimory Aubertoe (Roeral > 10 mm length) Bervilum Bervilum Bervilum Bervilum Checrete Che
<b>3</b>	INORGANICS Auminoria Ammoria Antimory Asbestos (Rostal > Berlum Beryilum Beryilum Boron Boron Chorente

<sup>\*•</sup> Under raview.

•• Copper — action level 1.3 mg/L, Leed — action level 0.015 mg/L

•• Copper — action level 1.3 mg/L, Leed — action level 0.015 mg/L

••• Measured as free chlorine.

¹ Regulated as chlorine.
² In food.
² In water.
⁴ Being remanded

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AND AND SECURITY STATES OF THE SECURITY	0.005 0.005 0.005 0.0000000000000000000	16 pc/l. 160 pc/l.
Bibles Bi		
Standards Standards Standards (mg/l) (mg/l)	F 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	F zero 4 mrem F zero 15 pcM. F zero 300 P zero 300 P zero 300
Charles	Nitrite (ss. N.) Nitrate + Mittle (both ss. N.) Selenkum Selenkum Sodkum Strontkum Strontkum Sulfate The Blum Vanadkum Vanadkum Zinc	RADIONUCLIDES Beta particle and photon activity (forment) man-made radionuclibee) Gross siphs particle activity Combined Rection 229 & 228 Redon Unavam

<sup>\*</sup> Under review. \*\* Guidance. +1991 Proposed National Primary Drinking Water Rule for Radionucildes

### Secondary Maximum Contaminant Levels

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Page 10

SMCL* (mg/L)	0.05 to 0.2	15 color units	non-corrosive	0.5	0.05 3.threshold odor numbers	6.5—8.5	250	5
Status	ц.	F	F	T 2	F	T F	4	ட
Chemicals	Aluminum Chloride	Color	Corrosivity Fluoride*	Foaming agents Iron	Manganese Cotor The Part of th	pH  S  V <b>er</b>	Sulfate Total dissolved solids (TDS)	Zinc

Status Codes: P -- proposed, F -- final

\* Under review.

### Microbiology

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MC	• #	F F	1 8	F
MCLG	o az	Zero	zero NA	Zero
Status MCLG		L L	F	F.
	oridium ambia	Legionella Standard Plate Count	oliforms	
	Cryptosporidium Glardia lambila	Legionella Standard	Total Coliforms Turbidity	Viruses

Key: PS, TT, F, defined as previously stated.

Final for systems using surface water; also being considered for regulation under groundwater disinfection rule.

### CIRCULAR WQB-7

## MONTANA NUMERIC WATER QUALITY STANDARDS



Montana Department of Environmental Quality
Water Quality Division ••• Technical Studies & Special Projects Section 1400 Broadway, Room A-206 Post Office Box 200901 Helena, Montana 59620

TIELEPHONE: (406) 444-2406 ••• FAX: (406) 444-1374

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that CIRCULAR WQB-7 will be added to, modified, and/or updated as additional or new information becomes available. Care should be exercised to ensure CIRCULAR WQB-7, Montana Numerical Water Quality Standards, is a compilation of the most recent Standards available for both Surface Waters and Ground Waters. Reference sources used to compile CIRCULAR WQB-7 are the Environmental Protection Agency (EPA) Region VIII's Clean Water Act Section 304(a) Criteria Chart, dated 07/01/1993, and Standards established as drinking water maximum contaminant levels (MCL's). It is anticipated that the most recent version (by date) is used as a reference.

CIRCULAR WQB-7 is a complex document. Close attention must be paid to the frequent use of 'detailed notes of explanation'. They are used in both the table headings and individual line items, many times, both. Detailed notes of explanation follow the table portion of CIRCULAR WQB-7 and are found

in the format of (n) where n is a number.

CIRCULAR WQB-7 uses the more restrictive value of either the 304(a) criteria or the drinking water MCL for Human Health Standards, whenever required, in order to be able to fully protect the concept of 'multi-use' of Montana's waters. For instance, if the human-health Standard for a particular pollutant has been established at 1,200 µg/L (micro-grams per Liter) and the same pollutant has an organoleptic (taste and/or odor) Standard established at 20 µg/L, then CIRCULAR WQB-7 would have the Standard set at the more limiting value of 20 µg/L. In similiar manner, whenever both Aquatic Life Standards and Human Health Standards exist for the same analyte, the more restrictive of these values will be used as the numeric Surface Water Quality Standard.

for both surface waters and ground waters. For a given pollutant, the Human Health Standard is the same for both surface and ground water but the analysis degredation rules ARM 16.20.701 et seq to determine and evaluate degradation. Standards for 'Harmful' parameters will be used as nondegredation criteria method differs. Except where noted, the surface water analysis method is always 'total-recoverable' while the analysis method used for ground water will CIRCULAR WQB-7 sets Standards for surface and ground waters. In addition WQB-7 lists values which are to be used in conjunction with the nonbe 'dissolved'

Special attention should be paid to the pollutants/conditions such as ammonia, hardness, and oxygen as the Standards are set over a range of values, or are computed using a complex formula, or depend upon special circumstances.

Alkalinity, chloride, hardness, sediment, sulfate, and total dissolved solids have 'Narrative Standards' and are referenced back to the Administrative Rules of Montana (ARM) 16.20.633(1) et seq and ARM 16.20.1003 et seq for further details and explanation.

The Standards for fecal coliform, color, dissolved gases, odor, pH, and temperature are dependent upon the water-use classifications as specified in ARM, Title 16, Chapter 20 - Water Quality, Sub-Chapter 6, SURFACE WATER QUALITY STANDARDS.

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December, 1995 CIRCUL	CIRCULAR WQB-7, MONTANA NUMERIC WATER QUALITY STANDARDS	TANA NUMER	LIC WATER OF	ALITY STAND	ARDS (6)		Page	Page 3 of 39 pages
Except where indicated, values are listed as micro-grams-per-liter (ug/L).	A '' indicates that a Star	ndard has not been ad	tes that a Standard has not been adapted or information is currently unavailable.	currently unavailable.		A '(n)' indicates that a detailed note of explanation is provided.	ailed note of explan	tion is provided.
Bollindone	CASRN, NIOSH and		Aquatic Life Standards (16)	indards (16)	i			Required
Element / Chemical Compound or Condition	25A.A. (NUMBERS (25) (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Bioconcentration Factor (BCF) (5)	Human Health Mandards (17)	Trigger Value (22)	Reporting Value (19)
Accasphthene  \$	83329 or 83-32-9 NIOSH: AB 1255500 SAX: AAE750	Harmful		1	242	20	V/V	01
Aceasphitylene (PAB)  ## —   Cyclopenta(De)Naphthalene	208968 or 208-96-8 NIOSH: AB 1254000 SAX: AAF500	Toxin	•	ı	30	- Travella Billion and a contract of the contr	2.3	10
Acrolein  \$\$ —  \$ Bocide \$ Crolean \$ Aqualin \$ Aqualine \$ Propenal \$ SHA 00701  \$ 2-propenal \$ Acraldehyde \$ Acryladehyde \$ Acrylic Aldehyde \$ Ethylene Aldehyde	107028 or 107-02-8 NIOSH: AS 1050000 SAX: ADRO00	Toxin	1	ı	215	320	0.7	20
Acrylamide  § 2-Propenamide  Propenamide § Acrylic Amide § Ethylenecarboxamide § RCRA Watte Number  U007	79061 or 79-06-1 NIOSH: AS 3325000 SAX: ADS250	Carcinogen	1	ı	ı	0.08	N/A	
Acrylomitrile  \$4  \$ Vencx \$ ENT 54 \$ TL 314 \$ Funigrain \$ Carbacryl \$ Cyanoethylene  \$ Viryl cyalle \$ Propenenitrile \$ 2-Propenenitrile \$ Acrylomitrile monomer  \$ RCRA Waste Number U009	107131 or 107-13-1 NIOSH: AT 5250000 SAX: ADX500	Carcinogen			Og	65.0	N/A	
Alachlor  ##  ## China   Lamo   Alator   Alanex   Alochlor   Fillarzo   Metachlor   Fillarzo   Metachlor   Fillarzo   Metachlor   Chinaclor   SHA 099501   Methachlor   2-Chloro-N-C.6-Diethyl)Phenyl-N-Methoxymethylacetamide   2-Chloro-2,6-Diethyl-N-(Methoxymethyl)Acetamide   2-Chloro-2,6-Diethyl-N-(Methoxymethyl)Acetamide	15972608 or 15972-60-8 NIOSH: AE 1225000 SAX: CFX000	Carcinogen		-	1	2	V/V	0.4
Aldicarb  # Temik  # Temic # Ambush # OMS 771 # Temik G 10 # Aldecarb # Carbamyl # State 10 # Sulfone Aldoxycarb # Union Carbide 21149 # RCRA Wates burnher POTO # Propanal, 2-Methyl-2-(Methylithio)-, O- [(Methylamino)Carbonyl]Oxine	116063 or 116-06-3 NIOSH: UE 2275000 SAX: CBM500	Toxin		1	1	-	_	1
Addicarb Sulfone  14 Adoxycarb  5 Sunfoarb § Sulfoarb § SHA 110801 § Propionaldehyde, 2-Methyl-2-  6 Methylaniforp). O-O-Methylcarbomoyl)Oxime § 2-Methyl-2-(Methylaniforpy)Propanal  O-[(Methylaniforp)-Carbonyl]Oxime	1646884 or 1646-88-4 NIOSH: UE 2080000 SAX: AFK000	Toxin		1	-		-	
Adicarb Salfoxide 18 —	1646873 or 1646-87-3 NIOSH: — SAX: —	Toxin	I		I	4		-

December, 1995 CIRCUL	CIRCULAR WQB-7, MONTANA NUMERIC WATER OUALITY STANDARDS	TANA NUME	RIC WATER OF	UALITY STAN	DARDS (6)		P	1-530
Except where indicated, values are listed as micro-grams-per-liter (ag/L).	A '' indicates that a Standard has not been adapted or information is currently unassailable	andard has not been	idented or information is	currently mayallahle		A 16.33 E-21.24	rage	rage 4 of 39 pages
	CASDN MINCH AND					A (b) makeles that a detailed note of explanation is provided.	niled note of explan	tion is provided.
Pollutant	SAX Numbers		Aquatic Life Standards (16)	andards (16)	Ricconcontration	Unman Walls Co. 3 1.		Required
Denent / Chemical Compound or Condition	(25) (20) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Factor (BCF) (5)	numan nealth Mandards (17)	Ingger value	Keporting Value (19)
Addras  \$4	309002 or 309-00-2 NIOSH: 10 2100000 SAX: AFK250	Carcinogen	51		4,670	0.0013	N/A	0.2
Dimethanonaphthalene § 1,2,3,4,10,10-Hexachloro-1,4,4s,5,8,8a-Hexahydro-1,4,5,8. Dimethanonaphthalene § 1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-Hexachloro-1,4,45,8-Bexachloro-6,2,8a-Hexachloro-6,2,8a-Hexachloro-6,4,5,8-Bexachloro-6,4,5,8-Bexachloro-6,4,5,8-Bexachloro-6,4,5,8-Bexachloro-6,4,5,8-Bexachloro-6,4,5,8-Bexachloro-6,4,5,8-Bexachloro-6,4,5,8-Bexachloro-6,4,5,8-Bexachloro-6,4,5,8-Bexachloro-6,4,5,8-Bexachloro-6,4,5,8-Bexachloro-6,4,5,8-Bexachloro-6,4,5,8-Bexachloro-6,4,5,8-Bexachloro-6,5,8-Bexachloro								·
Alkalinity, total, as CaCO,  §§ —	471341 or 471-34-1 NIOSH: — SAX: —	Natrative (18)		***	1		1	5,000
Alpha Emitters  \$1 —  \$ Gross Alpha \$ Adjusted Gross Alpha	Multiple	Carcinogen / Radioactive			1	150 pico-curies/liter	N/A	
Aluminum, pH 6.5 to 9.0 only (9) (6)	7429905 or 7429-90-5 NIOSH: BD 0330000 SAX: AQX000	Toxin	750	87			30	100
Ammonia [total ammonia mitrogen (NHs.N plus NH.N)] as mg/l N  \$ Ammonia Anhydrous \$ Anhydrous Ammonia \$ Spirit of Hartshorn	7664417 or 7664-41-7 NIOSH: BO 0875000 SAX: AMY500	Toxin	(7)(8)	(T)(S)			10	S
Anthracene (PAH)  §§ Peranaphthalene  § Green Oil § Anthracin § Tetra Olive N2G	120127 or 120-12-7 NIOSH: CA 9350000 SAX: APG500	Toxin			30	009'6	0.04	0.2
Artimony (?) §§ Sh § Antimony Black § Antimony Regulus § C.I. 77050 § Stibium	7440360 or 7440-36-0 NIOSH: CC 4025000 SAX: AQB750	Toxin			-	9	0.4	3
Aroclar 1016  19 PCB 1016  9 PCB-1016  Arochor 1016  (Aroclor 1016)	12674112 or 12674-11-2 NIOSH: — SAX: —	Carcinogen	ı	0.014	31,200	0.00044	N/A	_
Aroclor 1221  § PCB 1221  § PCB-1221 § Arochlor 1221 § Chlorodiphenyl (21 % Cl) § Polychlorinated Biphenyl (Arochor 1221)	11104282 or 11104-28-2 NIOSH: TQ 1352000 SAX: PJM000	Carcinogen	1	0.014	31,200	0.00044	N/A	15
Aroclor 1232 §§ PCB 1232 § Arochlor 1232 § Chlorodiphenyl (32% Cl) § Polychlorinated Biphenyl (Aroclor 1222)	11141165 or 11141-16-5 NIOSH: TQ 1354000 SAX: PIM250	Carcinogen		0.014	31,200	0.00044	NIA	_

Except where indicated, values are listed as micro-grams-per-lifer (ug/L).				5.9md / 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
Pollutatt   Pollutatt   SAX Numbers   CASRN, NIOSH and SAX Numbers   SAX Numbers   Category (1) (2)   Actute (3)   Chronic   Category (1) (2)   Actute (3)   Category (1) (3)   Actual   Ac	pted or information is currently unavailable.	A '(n)' indicates that a deta	A '(n)' indicates that a detailed note of explanation is provided.	s provided.
Edement   Chemical Compound or Condition   Carologos   Category (1) (2)   Acute (3)   Chronic		<u></u>	<u>_</u>	Required
Arochlor 1242   Chlorodiphenyl (42 % Cl)   Polychlorinated Biphenyl   SAX: PIM500	Chronic (4)	Factor (BCF) (5) (17)	(22)	Keporting Value (19)
1267229 or 12672-29-6 Carcinogen NIOSH: TO 1358000 SAX: PIM/50 11097691 or 11097-69-1 Carcinogen NIOSH: TO 1360000 SAX: PIN000 SAX: PIN200 SAX: PIN200 SAX: PIN250 SAX: PIN250 SAX: PIN250 SAX: PIN500 SAX: PIN500 SAX: PIN500		0.00044	N/A 1	
11097691 or 11097-69-1 Carcinogen NIOSH: TQ 1360000 SAX: PIN000 11096825 or 11096-82-5 Carcinogen NIOSH: TQ 1362000 SAX: PIN250 37324235 or 37324-23-5 Carcinogen NIOSH: TQ 1364000 SAX: PIN500		0.00044	N/A	
# Clophen A60 # Arochlor 1260 # Phenoclor DP6 # Chlorodiphenyl SAX: PIN250  Polychlorinated Biphenyl (Aroclor 1260) # Thenoclor DP6 # Chlorodiphenyl SAX: PIN250  ## Arochlor 1262 # Chlorodiphenyl (62, Cl) # Polychlorinated Biphenyl SAX: PIN500	0.014 31,200	0.00044	. <b>Y/N</b>	
37324235 or 37324-23-5 Carcinogen — NIOSH: TQ 1364000   Arcchlor 1262		0.00044	N/A I	
_	- 0.014 31,200	0.00044	N/A 1	
Arecher 1268         # PCB 1268         # PCB 1268         # Archor 1268         # Chlorodiphenyl (68 % Ct)         # Polychlorinated Biphenyl         SAX: PIN750         Polychlorinated Biphenyl         SAX: PIN750         Polychlorinated Biphenyl	0.014 31,200	0.00044	N/A 1	
Arochlor 2565 § Polychlorinated Biphenyl (Aroclor 2565)		0.00044	N/A 1	
Arocher 4465   Polychlorinated Biphenyl (Aroclor 4465)   SAX: P10250   P1120-29-9   Carcinogen     0.014     PCB 4465   Arochlor 4465   Polychlorinated Biphenyl (Aroclor 4465)   SAX: P10250   SAX: P10250	0.014 31,200	0.00044	N/A 1	
Polychlorinated Bipbeary (Kanechlor 300)         37353632 or 37353-63-2         Carcinogen         —         0.014           ## —         NIOSH: TQ 1372000         SAX: P10500         SAX: P1050	0.014 31,200	0.00044	N/A 1	
Polythiorinated Bipleary (Kanechlor 400)   12737870 or 12737-87-0   Carcinogen	0.014 31,200	0.00044	N/A 1	
Polychlotrasted Biphenyl (Kanechlor 500)   37317412 or 3731741.2   Carcinogen   0.014		0.00044	N/A	

December, 1995 CIRCUL	CIRCULAR WQB-7, MONTANA NUMERIC WATER QUALITY STANDARDS	TANA NUME	RIC WATER OF	JALITY STANI	DARDS (6)		Page	Page 6 of 30 mages
Except where indicated, values are listed as micro-grams-per-liter (sg/L).	A '' indicates that a Standard has not been adapted or information is currently unavailable.	andard has not been a	idapted or information is	currently mavailable	- 11	A '(n)' indicates that a detailed note of explanation is moveded	age , age	ation is marided
Polintan	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)	1			Required
iği	(25) (20) (27)	Category (1) (3)	Acute (3)	Chronic (4)	Bioconcentration Factor (BCF) (5)	Human Health Standards	Trigger Value	Reporting Value (19)
Polychlorinated Biphenyls, mixed	1336363 or 1336-36-3 NIOSH: TO 1350000	Carcinogen		0.014	31,200	0.00044	N/A	1
Aroclor § Chlophen § Chlorextol § Chlorinated Biphenyl § Chlorinated Diphenyl a Chlorinated Diphenylens § Chloro Biphenyl § Chloro-1,-Biphenyl § Clochen	SAX: PIL750							
\$ Dykanol \$ Fenclor \$ Inerteen \$ Kanechlor \$ Montar \$ Noffamol \$ PCB								
(DOI) # Phemochior # Polychlorobiphenyl # Pyralene # Pyranol # Santotherm # Sovol # Therminol FR-1								
Arsenic, inorganic (9)	7440382 or 7440-38-2	Carcinogen	360	190	4	18	N/A	3
# Arenicals # Artenic-75 # Artenic Black # Colloidal Artenic # Grey Artenic	NIOSH: CG 0525000 SAX: ARA750							
Asherine Channelle								
Associate, Carysonie	12001295 or 12001-29-5 NIOSH: CT 6478500	Carcinogen		1	ı	700,000 fibers/liter	V/A	
§ 7-45 Asbestos § Asbestos (ACGIH) § Asbestos, White Dot § Avibest C	SAX: ARM268						•	
# Calidria RG 100 # Calidria RG 144 # Calidria RG 600 # Cassir AK # Chrysotile								
Aubenos # Chrysottie (LVCI) # Hooker Number I Chrysottie Asbestos # Metaxite # NCI C61223A # Plantibest 20 # Serpentine # Serpentine Chrysottie # Sylodex								
# White Asbestos								
Asbestos, Actinolite	77536664 or 77536-66-4	Carcinogen				700,000 fibers/liter	N/A	
4 Asbestos (ACGIII) § Actinolite Asbestos	SAX: ARM260							
Asbestos, Amosite	12172735 or 12172-73-5	Carcinogen			_	700.000 fibers/liter	V/V	
#8 # Amosite Asbestos # Asbestos (ACGIH) # Mysonite # NCI C60253A	NIOSH: CI 6477000 SAX: ARM262							
Asbestos, Anthophylite	77536675 or 77536-67-5	Carcinogen	1			700.000 fibera/liter	V/Z	
# Arthophylite	NIOSH: CI 6478000 SAX: ARM264							
Asbestos	1332214 or 1332-21-4	Carcinogen			1	700 000 Shers/liter	4/2	
		)						
# Annualmus # Amostic (Ubs.) # Amphibole # Asbertos Fiber # Fibrous Grunerite # NCI CO8991 # Serpentine	SAX: ARM 250		,					
Asbestos, Crocidolite	12001284 or 12001-28-4	Carcinogen	-		!	700,000 fibera/liter	N/A	
1 Amorphous Crocidolite Asbestos 1 Asbestos (ACGIH) 1 Blue Asbestos (DOT)	SAX: ARM275							
# Crocidolite Aubestos # NCI C09007 # Crocidolite (DOT) # Fibrous Crocidolite Asbestos								
Asbestos, Tremolite	77536686 or 77536-68-6	Carcinogen				700,000 fibers/liter	N/A	
# Asbestos (ACGIH) # Fibrous Tremolite # NCI C08991 # Tremolite Asbestos	NIOSH: 6560000 SAX: ARM280							

December, 1995 CIRCUL	CIRCULAR WQB-7, MON	ITANA NUMEI	7, MONTANA NUMERIC WATER QUALITY STANDARDS	JALITY STANI	OARDS (6)		Page	Page 7 of 39 pages
Except where indicated, values are listed as micro-grams-per-liter (ng/L).	A '-, indicates that a Standard has not been adapted or information is currently unavailable.	andard has not been a	dapted or information is	currently unavailable.		A '(n)' indicates that a detailed note of explanation is provided.	iled note of explan	tion is provided.
Polludoné	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)	11			Required
Element / Chemical Compound or Condition	25, (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Bioconcentration Factor (BCF) (5)	Human Health Standards	Trigger Value	Reporting
Atrazine  # —  # Active # Attikon # Atresine # Atred # Candex # Crisatrina # Crisazine # Cyazin # Fenanin # Fenanine # Zeaphon # Fenatrol # Geseprim # Hungazin # Inakor # Primatol # Malermais # Radazin # Radizine # Shell Atrazine herbicide # Strazine # Triazine A 1294 # Vectal # Weedex A # Womat # Zeazin # Zeazine # SHA 08003 # 1-Choro-3-Enpropylamino-2-leopropylamino-2-factoropylamino-6		Toxin	I	1		3	0.1	970
Barium (9) ii Ba	7440393 or 7440-39-3 NIOSH: CA 8370000 SAX: BAH250	Toxin	1		· —	1,000	2	S
Benzone §§	71432 or 71-43-2 NIOSH: CY 140000 SAX: BBL250	Carcinogen			5.2	v	N/A	0.5
Benzidine  \$1 —  \$ p. Diaminobiphenyl \$ 4,4'-Biphenyldiamine \$ p.p'-Diaminobiphenyl \$ 4,4'-Diaminobiphenyl \$ 4,4'-Diaminodiphenyl \$ RCRA Wate Number U021 \$ 4,4'-Biphenylenediamine \$ 4,4'-Diamino- \$ 4,4'-Diamino- \$ 1.1'-Biphenyl \$ (1,1'-Biphenyl) \$ 1.1'-Biphenyl \$ 1.1'-B	92875 or 92-87-5 NIOSH: DC 9625000 SAX: BBX000	Carcinogen			87.5	0.0012	V/V	20
Benzialanthracene (PAH)  § — § Tetrphene § Benzanthracene § Benzoanthracene § Naphthanthracene § 1.2-Benzanthrene § BenzialAnthracene § BenzialAnthracene § 1.2-Benzanthracene § BenzialAnthracene § 1.2-Benzianthracene § Benzanthracene, 1.2- § 1.2-BenzialAnthracene § 2,3-Benzianthracene § RCRA Weste Number U018		Carcinogen	1	I	30	0.044	N/A	0,25
Berzo(b)Fhoranthese (PAH)  § B(b)F § Benzo(b)Fluoranthene § Benzo(e)Fluoranthene § Benzo(e)Fluoranthene  § 2,3-Benzulvoranthene § 2,4-Benzulvoranthene § 3,4-Benzo(luoranthene  § 2,3-Benzulvoranthene § 2,3-Benzulvoranthene § Benz(e)Acephenanthrylene  § Benzie]Acephenanthrylene § 3,4-Benzo(laoranthrylene	205992 or 205-99-2 NIOSH: CU 140000 SAX: BAW250	Carcinogen	1	. 1	30	0.044	N/A	0.25

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Dollardone	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)	1		,	Required
Fourtain Compound or Condition	25, (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Factor (BCF) (5)	Human Health Mandards (17)	Ingger value (22)	Value (19)
Benzofk/Fluoranthene (RAH)  §  § Benzofk/Fluoranthene § 8,9-Benzofluoranthene § Dibenzofb.jk/Fluorene  § 2,3,1'8'-Binaphthylene § 11,12-Benzofluoranthene § 11,12-Benzofk)Fluorenthene	207089 or 207-08-9 NIOSH: DF 635000 SAX: BCJ750	Carcinogen	_	1.	30	0.044	N/A	0.25
Bezzo(g.h.)perylene (PAH) §§ 1,12 Bezzoperylene § 1,12 Bezzperylene § Bezzo(gh))Perylene	191242 or 191-24-2 NIOSH: DI 6200500 SAX: BCR000	Toxin			30		9/0.0	01
Benzo(allyrene (PAH)  § a.— § B.— § 3.4-BP § Benz(a)Pyrene § Benzo-a-Pyrene § 3.4-Benzpyrene § 6.7-Benzopyrene § 3.4-Benzopyrene § 3.4-Benzopyrene § 6.7-Benzopyrene	50328 or 50-32-8 NIOSH: DJ 3675000 SAX: BCS750	Carcinogen		1	30	0.2	N/A	0.2
Beryllium (9)  §§ Bo  § Beryllium-9 § Glucinum § RCRA Wate Number P015	7440417 or 7440-41-7 NIOSH: DS 1750000 SAX: BF0750	Carcinogen		1	61	40	N/A	
Beta-Chloronaphthalene  §§ 2-Chloronaphthalene  § 4-Chloronaphthalene § Nephthalene, 2-Chloro-  § 8-CRA Warte Number U047	91587 or 91-58-7 NIOSH: QJ 2275000 SAX: CJA000	Toxin	***	-	202	1,700	0.94	10
Beta Emitters (19)  # # Gross Beta	12587472 or 12587-47-2 NIOSH: — SAX: —	Carcinogen / Radioactive	•		-	40 mrem ede/yr.	N/A	1
Bis(2-Chloroethoxy)Methane  19 1 Bis(2-Chloroethy)Formal	111911 or 111-91-1 NIOSH: PA 3675000 SAX: BID750	Toxin		<b></b>	0.64	I	0.5	1
Bis (2-Chioroisopropy) Ether  1	108601 or 108-60-1 NIOSH: KN 175000 SAX: BIIZ50	Toxin		1	2.47	1,400	8.0	01
Bis(Chlorochy))Ether  18—  18—  18—  18—  18—  18—  18—  18	111444 or 111 444 NIOSH: KN 087500 SAX: BIC750	Carcinogen	1	. 1	6'9	0.31	N/A	01

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Except where indicated, values are listed as micro-grams-per-liter (ag/L).	A '' indicates that a Standard has not been adapted or information is currently unavailable.	adard has not been ac	dapted or information k	s currently unavailable.		A '(n)' indicates that a detailed note of explanation is provided	iled note of explan	tion is provided.
Dollman	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)				Required
Element / Chemical Compound or Condition	(25) (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Bioconcentration Factor (BCF) (5)	Human Health Standards (17)	Trigger Value (22)	Reporting Value (19)
Bic(Chloromethyl)Ether  # BCME   bis-CME   Chloromethyl Ether   Oxybis(Chloromethane)  # RCRA Wate Number POI6   Bis (Chloromethyl) Ether   sym-Dichlorodimethyl  Ether   1,1-1Dichlorodimethyl Ether   Dimethyl-1,1-Dichloroether    Chloro(Chloromethoxy)Metane	542881 or 542-88-1 NIOSH: 1575000 SAX: BIKO00	Carcinogen	1	_	0.63	0.0016	N/A	10
Bromodichloromethane (RIM)  ##  # BDCM # NCI C55243 # Dichlorobromomethane # Methane, bromodichloro-  # Dichloromonobromomethane # Monobromodichloromethane	75274 or 75-27-4 NIOSH: PA 5310000 SAX: BND500	Cercinogen	1		3.75	5.6	N/A	0.5
P-Bromodiphenyl Ether  #  # P-Bromodiphenyl Ether # 4-Bromophenoxybenzene # 4-Bromodiphenyl Ether  # P-Bromod-Phenoxybenzene # p-Bromophenylphenyl Ether # 4-Bromophenyl Phenyl  Ether # Benzene, 1-Bromo-4-Phenoxy-	101553 or 101-55-3 NIOSH: — SAX: —	Toxin with BCF >300	I	1	1,640	-	N/A	10
Bromoform (HM)  §§ Tribromomethane  § NCI C55130 § Methane, Tribromo- § Methenyl Tribromide § RCRA Waste  Number U725	75252 or 75-25-2 NIOSH: PB 560000 SAX: BNL000	Carcinogen			3.75	43	N/A	0.5
Bromomethane (HM)  \$ Methyl Bromide  \$ EDCO \$ Celfume \$ Dowfume \$ Methogas \$ SHA 053201 \$ Brom-O-Sol  \$ Brom-O-Gas \$ Terr-O-Gas \$ Halon 1001 \$ Terr-O-Cide \$ Brom-O-Gas  \$ Brom Methane \$ Methylbromide \$ Methyl Bromide \$ Methane, Bromo-  \$ Monobromomethane \$ RCRA Waste Number U029	74839 or 74-83-9 NIOSH: PA 4900000 SAX: BNM500	Toxin	I	I	3.75	89	0.11	0.5
Buryl Benryl Pathalate  \$4 —  \$ BRP \$ Sicol 160 \$ Unimoll BB \$ Palatinol BB \$ Santicizer 160  \$ BRP \$ Sicol 160 \$ Unimoll BB \$ Palatinol BB \$ Santicizer 160  \$ Buryl Pethalate \$ Benryl n-Buryl Phthalate \$ Benryl Buryl Puthalate \$ n-Benryl Buryl Pethalate \$ benryl Phthalate \$ pethalate \$ pethal	85687 or 85-68-7 NIOSH: TH 9990000 SAX: BEC500	Toxin with BCF >300	1		414	3,000	N/A	01
Cadmium (9) §§ Cd § C.I. 77180 § Colloidal Cadmium	7440439 or 7440-43-9 NIOSH: EU 9800000 SAX: CAD000	Toxin	3.9 <b>@</b> 100 mg/l hardness (12)	1.1 <b>@</b> 100 mg/l hardness (12)	64	\$	0.1	0.1
Carbofuran  #	1563662 or 1563-66-2 NIOSH: FB 9450000 SAX: FPE000	Toxin	·	1	1	40		1

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Dollies	CASRN, NIOSH and		Aquatic Life Standards (16)	ndards (16)				Required
Element / Chemical Compound or Condition	25, (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Bioconcentration Factor (BCF) (5)	Human Health Standards	Trigger Value (22)	Reporting Value (19)
Carbon Tetrachloride  18 —  18 III	56235 or 56-23-5 NIOSH: FG 490000 SAX: CBY000	Carcinogen			18.75	2.5	V/V	0.5
Cesium (18) §§ Cs	Cesium 134 13967709 or 13967-70-9 NIOSH: — SAX: —	Carcinogen / Radioactive				40 mrem ede/yr	N/A	
Cesium (19) H Cs	Cesium 137 10045973 or 10045-97-3 NIOSH: — SAX: —	Carcinogen / Radioactive				40 mrem ede/yr	N/A	
Cesium (19) §§ Cs	Cesium 137 12587472 or 12587-47-2 NIOSH: — SAX: —	Carcinogen / Radioactive		1		40 mrem ede/yr	N/A	1
Cesium (19)  §§ Cs	Cesium 144	Carcinogen / Radioactive	I	ı		40 mrem ede/yr	N/A	1
Chlordane  \$\frac{1}{4}\$ Belt \$\frac{1}{4}\$ Niran \$\frac{1}{4}\$ Dowchlor \$\frac{1}{4}\$ Chlordan \$\frac{1}{4}\$ Clordano \$\frac{1}{4}\$ Chlor Kil \$\frac{1}{4}\$ Belt \$\frac{1}{4}\$ Niran \$\frac{1}{4}\$ Dowchlor \$\frac{1}{4}\$ SHA 055201 \$\frac{1}{4}\$ Gold Great C-100 \$\frac{1}{4}\$ Chlordane, Technical \$\frac{1}{4}\$ RCRA Ware Number U036 \$\frac{1}{4}\$ Cotachloro-4,7- Methinohydroindane \$\frac{1}{4}\$ Octachloro-4,7-Methinochtany divinional \$\frac{1}{4}\$,2,6,7,8,8- Octachloro-2,4,7,7-Hezahydro \$\frac{1}{4}\$ Cotachloro-3,4,7,7-tetrahydro- \$\frac{1}{4}\$ 1,2,4,5,6,7,8. Cotachloro-2,3,3,4,7,7-Hezahydro- \$\frac{1}{4}\$ 1,2,4,5,6,7,8. Octachloro-2,3,3,4,7,7-Hezahydro- Methino-1H-Indene 1,2,4,5,6,7,8,3-Octachloro-2,3,3,4,7,7-Hezahydro-	57749 or 57-74-9 NIOSH: PB 9800000 SAX: CDR750	Carcinogen	1.3	0.0043	14,100	0.0057	NIA	0.4
alpha-Chlordane # cis-Chlordan # cis-Chlordane # \alpha \text{Cis}-Chlordane # Chlordane # Chlordane, cis-Isomer		Carcinogen .	1.2	0.0043	14,100	0.0057	V/V	0.4
gamma-Chlordane  \$	5103742 or 5103-74-2 NIOSH: — SAX: —	Carcinogen	1.2	0.0043	14,100	0.0057	V/V	9.4

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Except where indicated, values are listed as micro-grams-per-liter (µg/L).	A '' indicates that a Standard has not been adapted or information is currently unavailable.	ndard has not been ac	lapted or information is	currently unavailable.		A '(n)' indicates that a detailed note of explanation is provided	alled note of explan	ation is provided.
A PARTY OF THE PAR	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)		The Court of the C	Trience Volte	Required
Element / Chemical Compound or Condition	(25) (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Factor (BCF) (5)	(17)	(22)	Value (19)
trans-Nonachlor (Chlordane component) ## — # Chlordane, trans-leomer	80-5	Carcinogen	1.2	0.0043	14,100	0.0057	V/V	0.4
Chloride 11	16887006 or 16887-00-6 NIOSH: SAX:	Narrative (16)	860,000	230,000		-	N/A	1,000
Chlorine, total residual  \$ Cl  Bertholite & Chlorine, molecular & Molecular Chlorine	7782505 or 7782-50-5 NIOSH: FO 2100000 SAX: CDV750	Toxin	61	11		-	001	+
p-Chloro-m-Cresol ##— # PCMC # Parol # Aptal # Battol # Battolan # Ottafact # Raschit # Rasen- Anicon # Parmetol # Candasepic # Chlorocresol # Preventol CMK # RCRA Waste Number U039 # Parachlorometra Cresol # 4-Chloro-3-methylphenol # 2-Chloro-Hydroxytoluene # Phenol, 4-Chloro-3-methyl- # Chlorophenol, 4-, methyl, 3-	59507 or 59-50-7 NIOSH: GO 710000 SAX: CFE250	Hermful	I	1	1	3,000	N/A	20
Chlorobenzene  # Monochlorobenzene  # MCB # Chlorobenzene  # Enclorobenzene  # Chlorobenzene   Chlorobenzene   Phenyl Chloride   Benzene Chloride  # Benzene, Chloro- # Monochlorbenzene   RCRA Waste Number U037  # NCI C54886	108907 or 108-90-7 NIOSH: CZ 0175000 SAX: BBM750	Harmful	1	ı	10.3	20	N/A	0.5
2-Chloroethyl Vinyl Ether # — Achloroethyl Dinese # RCRA Waste Number U042 # Vinyl 6-Chloroethyl Ether # (2-Chloroethyl Ether # Warth 2-Chloroethyl Ether	110758 or 110-75-8 NIOSH: KN 630000 SAX: CHIZ50	Carcinogen	1	-	0.557	·	· V/Z	
Chloreform (HM)  # Trichloromethane # TCM # Freen 20 # Trichloroform # R-20 Refrigerant # Methenyl Chloride # From 1 Freen 20 # Trichloroform # R-20 Refrigerant # Methenyl Chloride # Formyl Trichloride # Methyl Trichloride # Methane Trichloride # RCRA Water Number U044 # NCI CO2686 Trichloro- # Methanyl Trichloride # RCRA Water Number U044 # NCI CO2686	67663 or 67-66-3 NIOSH: FS 9100000 SAX: CHI500	Carcinogen	-	-	3.75	57	N/A	0.5
Chlerocthane  # —  Achylis   Achylis Chloridum   Anodynon   Chelen   Chlorethyl   Chloridum   Achylis   Chloryl   Chloryl Anothetic   Ethyl Chloride   Ether Chloratus   Ether Hydrochloric   Ether Muriatic   Hydrochloric Ether   Kelene   Monochlorethyl   NCI C06224	75003 or 75-00-3 NIOSH: KH 7525000 SAX: EHH000	Toxin	1	-	1	1	0.52	
2-Chlorophenol   Chlorophenol, 2-   Phenol, 2-Chloro-   Phenol, o-Chloro-   RCRA Wate Number U048	95578 or 95-57-8 NIOSH: SK 2625000 SAX: CTK250	Harmful	-	1	134	0.1	V/V	01

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Pollutana	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)				Required
/ Chemic	2A.A. Numbers (25) (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Bioconcentration Factor (BCF) (5)	Human Health Standards	Trigger Value	Reporting Value (19)
4-Chlorophenyl Phenyl Ether #	7005723 or 7005-72-3 NIOSH: — SAX: —	Toxin with BCF >300	1		1,200		N/A	-
Chlorpyrifos  ## # Endon # Brodan # Endox # Durban # Lorban # Pyrinex # NA 2783 # Fridane # BrowCo 179 # SHA 059101 # Ethion, dry # Chlorothalonil # Chlorpyrifos-Ethyl # 0.0-Diethyl 0.3,5-Trichloro-2-Pyridyl Phosphorothioic Acid, 0.0-Diethyl 0.45,5-Trichloro-2-Pyridyl Ester	2921882 or 2921-88-2 NIOSH: TF 630000 SAX: DYE000	Toxin	0.083	0.041			0.025	1
Chromiess (9)  ## Cr  # Chrome	7440473 or 7440-47-3 NIOSH: GB 4200000 SAX: CMI750	Toxin			1	100	0.1	_
Chromium, trivalent (9)		Toxin	1,700 @ 100 mg/l hardness (12)	210 @ 100 mg/l hardness (12)	16	100		
Chromium, becavalent (9)  \$1 Chromium (VI)	18540299 or 18540-29-9 NIOSH: — SAX: —	Toxin	16	=	16	100	\$	5
Chrysene (PAH) ## # Benze(a)Phenanthrene # Benze(a)Phenanthrene # 1,2-Benzphenanthrene # 1.2-Benzophenanthrene # RCRA Waste Number 1050 # 1,2,5,6-Dibenzonaphthalene	218019 or 218-01-9 NIOSH: GC0700000 SAX: CML810	Carcinogen	-	ı	30	0.044	N/A	0.25
Coliform, fecal (13) (15)	N/A	Narrative - Surface Toxin - Ground	I	1	1	—, Surface 1 per 100mL, Ground	, Surface 1 per 100mL, Ground	i per 100mL, Surface I per 100mL, Ground
Color (13)	N/A	Hermful					N/A	S UNITS
Conductance, specific (21)	N/A	Narrativo		1			N/A	
Copper (9)  ## Cu ## Allbin Natural Copper # ANAC 110 # Arwood Copper # Bronze Powder ## Allbin Natural Copper # ANAC 110 # Arwood Copper # Bronze Powder ## CDA 101 # CDA 102 # CDA 110 # CDA 122 # C.I. 77400 # C.I. Figment ## CDA 101 # Copper Bronze # 1721 0old # Gold Bronze # Kafar Copper ## MI (Copper) # M2 (Copper) # OFHC C., # Rancy Copper	7440508 or 7440-50-8 NIOSH: GL 532500 SAX: CNR000	Toxin	18 @ 100 mg/l hardness (17)	12 @ 100 mg/l hardness (13)	36	1,000	0.5	_
Cyanide, total  19 —  1 Cyanide 1 Isocyanide 1 RCRA Waste Number P030 1 Cyanides, includes soluble safts and complexes	57125 or 57-12-5 NIOSH: GS 7175000 SAX: COI500	Toxin	n	5.2	1	200	'n	s

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Politriant	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)	Ē			Required
Element / Chemical Compound or Condition	(29 (29) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Factor (BCF) (5)	Human Health Mandards (17)	Trigger Value (22)	Reporting Value (19)
Dalapon  # — # Dalpon # Dowpon # Radapon # Revenge # Basinex # Ded-Weed # Dalacide # Gramevin # Crisapon # Dalpon Sodium # Sodium Dalapon # 2,2-Dichloropropionic Acid # SHA 28002, for sodium alt # SHA 28001, for dalapon only # Propionic Acid # SHA 28002, for sodium alt # SHA 28001, for dalapon only # Propionic Acid # a.cDichloropropionic Acid # a.cDichloropropionic Acid # a.cDichloropropionic Acid # a.cDichloropropionic Acid # apha-apha-Dichloropropionic Acid # apha-apha-	7590 or 75-99-0 NIOSH: UF 069000 SAX: DOI400	Toxin	1	I	. 1	200	1.3	3
Dalapon, sedium talt  \$1	127208 or 127-20-8 NIOSH: UF 1225000 SAX: DOIGO0	Toxin		I	1	200	1.3	3
Demeton  § ——  § Systox § Bay 10756 § Bayer \$169 § Demox § Diethoxy Thiophosphoric Acid  Ease of 2-Ethylmercaptoethanol § O,O-Diethyl 2-Ethylmercaptoethyl Thiophosphate  § O,O-Diethyl O(and S)-2-(Ethyl-Thio)Ethyl Phosphorothioate Mixture § E 1059  § ENT 17,205 § Mercaptophos § Systemox § Systox § ULV § Demeton-O +  Demeton-S	8065483 or 806548.3 NIOSH: TF 3150000 SAX: DAO600	Toxin		0.1	ı	I	i	1
DiG-Eltythexyl) Adipate  # Hexanodioic Acid  # DEHA # BEHA # Bioflex DOA # Effemoll DOA # Ergoplast AdDO # Flexol  A 26 # PX-238 # Reomol DOA # Vestinol OA # Wickenol 158 # Kodaflex DOA  # Monoglax DOA # NCI C54386 # Ocyl Adipate # Diocyl Adipate # BioC-Eltythexyl Adipate # Adipic Acid, BioC-Eltythexyl Deter # Hexanodioic Acid, BioC-Eltythexyl Deter # Hexanodioic Acid, BioC-Eltythexyl) Ester	103231 or 103-23-1 NIOSH: AU 9700000 SAX: AEO000	Toxin		1	- 1	400	0.5	9
DiC-Ethylbery) Phthalate (PAE)  §§ BigQ-Ethylbery) Phthalate  § BEHP § DEHP § Octoil § Fleximel § Flexol DOP § Kodaflex DOP  § Ethylbery Phthalate § Diethylbery Phthalate § 2-Ethylbery Phthalate  § DiCEthylbery) Phthalate § DiC-Ethylbery Phthalate § Bis (2-Ethylbery) Phthalate  § Bis(2-Ethylbery) -1,2-Benzene-Dicarboxylate § 1,2-Benzenedicarboxylic Acid, Bis (2-Ethylbery) Ethylbery) Pater	117817 or 117-81-7 NIOSH: TI 0350000 SAX: BIS000	Carcinogen		1	130		NA	٥
#-Dioctyl Phthalate ## ## DNOP # PX-138 # Vinicizer 85 # Dinopol NOP # n-Octyl Phthalate # Octyl Phthalate # Dioctyl Phthalate # Di-n-Octyl Phthalate ## RCRA Wate Number UIO7 # 1,2-Benzenedicarboxylic Acid, Dioctyl Ester	117840 or 117-84-0 NIOSH: TI 1925000 SAX: DVL600	Carvinogen			-		N/A	9

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Pollinione	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)	i.			Required
Element / Chemical Compound or Condition	(25) (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Factor (BCF) (5)	riuman Health Mandards (17)	1 rigger value (22)	Value (19)
Diberz[a,h]Anthracene (PAH)	53703 or 53-70-3 NIOSH: HN 2625000	Carcinogen	1	1.	30	0.044	N/A	0.5
BBA § DB(a,h)A § Dibenz(a,h)Anthracene § RCRA Waste Number U063	SAX: DCT400							
11,2,5,6-Dibenzanthracene 11,2.5,6-Dibenz(a) Anthracene								
1,3-Dibrome-3-Chloropopane	96128 or 96-12-8 NIOSH: TX 8750000	Carcinogen	-	-	!	0.2	N/A	0.05
BECP   Fumagon   Fumazone   NCI C00500   Nemabrom   Nemafume	SAX: DDL800							
Separation & Nemagone & Nemagone Soil Furnigant & Nemanax & Nemapaz								
Scarwell Number 287 5 Dibromochloropropane 5 RCRA Waste Number U066								
§ 1-Chloro-2,3-Dibromopropane § Propane, 1,2-Dibromo-3-Chloro- § EPA Pesticide Chemical Code 011301								
Dibromochloromethane (HM)	124481 or 124-48-1	Carcinogen			3.75	4.1	N/A	0.5
	NIOSH: PA 6360000							
§ CDBM § NCI C55254 § Chlorodibromomethane § Methane, Dibromochloro-	SAX: CFK500							`
1 Distribution of the state of	0.0.0					300	,,,	,,,,
Dibutyl Phihalate	84742 or 84-74-2	Toxin	1	ı	68	2,700	67.7	67.0
# DPB # Celluflex DPB # Elaci # Hexaplas M/B # Palatinol C # Polycizer DBP	SAX: DEHZ00							
PX 104   Staffex DBP   Witcizer   SHA 028001   Butylphthalate								
1 N-Butylphthalate 1 Dibutyl Phthalate 1 Di-n-Butylphthalate 1 Di-n-Butylphthalate								
5 Dibutyl-o-Phthalate 5 Di-n-Butyl Phthalate 5 RCRA Warte Number U069								
Fruthalic Acid Libutyl Effer   Dibutyl 1,2-Benzene Dicarboxylate   1,2-								
Benzeneutzeroxylic Acid Diouyi Ener § 1,4-Benzeneutzeroxylic Acid, Diouyi Ester								
1,3-Dichlorobenzene	95501 or 95-50-1	Toxin			55.6	009	0.02	10
-	NIOSH: CZ 4500000							
§ DCB § ODB § ODCB § Dizene § Cloroben § Chloroben § Chloroden	SAX: DEP600							
Fermitkii 5 Dilatin DB 5 Dowtherm E 5 Dilantin DB 5 o-Dichlorobenzene								
8 Ormodichlorocenzene 8 ormo-Dichlorocenzene 8 opeciel Lemmie Fluid 8 Benzene, 1.2-Dichloro- 8 RCRA Waste Number 1070								
1,3-Dichlorobenzeae	541731 or 541-73-1	Toxin	ļ	1	55.6	400	900.0	10
-	NIOSH: CZ 4499000							
§ M-Dichlorobenzene § m-Dichlorobenzene § meta-Dichlorobenzene	SAX: DEP699							
Dichlorobenzene, 1,3-   Benzene, 1,3-Dichloro-								

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Except where indicated, values are fisted as micro-grams-per-liter (gg/L).	A '' indicates that a Standard has not been adapted or information is currently unavailable.	ndard has not been ad	lapted or information i	s currently unavailable.		A '(n)' indicates that a detailed note of explanation is provided.	uled note of explan	tion is provided.
Pollutan	CASRN, MOSH and		Aquatic Life Standards (16)	andards (16)				Required
Element / Chemical Compound or Condition	(25) (26) (27)	Category (1) (3)	Acute (3)	Chronic (4)	Factor (BCF) (5)	Homan Health Standards (17)	Trigger Value (22)	Reporting Value (19)
1,4-Dichlorobenzene  # Para.  # PDE # PDCB # NCI C54955 # Evola # Paradi # Paradow # Perais-Perazol # PDE # PDCB # NCI C54955 # Evola # Parauge # di-Chloricide # Paracide # Parazene # Paramoth # Santochlor # Paraugges # di-Chloricide # Para Chystale # p-Dichlorobenzene # Carwell Number 632 # Paradichlorobenzene # para-Dichlorobenzene # Benzene, 1,4-Dichloro- # RCRA Waste Number U070 # RCRA Waste Number U071 # RCRA Waste Number U072 # p-Chlorophenyl Chloride # EPA Pesticide Chemical Code 061501	106467 or 106.46-7 NIOSH: CZ 455000 SAX: DEP800	Toxin	ı	I	55.6	75	0.00%	0
3,3'-D'kbloroberzidine  § 5 § DCI. 23060 § Curitane C126 § Dichloroberzidine § 0,0'- Dichloroberzidine § Dichloroberzidine Base § Berzidine, 3,3'-Dichloro- § RCRA Wate Number U073 § 3,3'-Dichloro- § RCRA Wate Number U073 § 1,3'-Dichloro- (1,1'-Bipheny)-4,4'-Diamine § 1,1'-Biphenyl-4,4'-Diamine, 3,3'-Dichloro-	91941 or 91-94-1 NIOSH: DD 0524000 SAX: DEQ400	Carcinogen	-	I	312	0.39	N/A	20
Dichlorodifhoromethane (HM)  §§ 1.2 § R 12 § FC 12 § Halon § CFC-12 § Arcton 6 § Electro-CF 12 § Electro 12 § Frigen 12 § Gentron 12 § Lecon 122 § Kaiser Chemicals 12 § Ledon 12 § Ucon 12 § Fropellant 12 § Ropellant 12 § Frigerant 12 § Fluorearbon 12 § RCRA Waste Number U075 § Difluorodichloromethane § Methane, dichlorodifluoro-	75718 or 75-71-8 NIOSH: PA \$200000 SAX: DFA600	Toxin	1		3.75	0,900	0.05	0.5
p.p'-Dichloroediphenyl Dichloroethane  # The # DDD # Dilene # NCI C00475 # Rothane # Rhothane # 4.4'-DDD  # TDE # DDD # Dilene # NCI C00475 # Rothane # Rhothane # 4.4'-DDD  # p.p'-DDD # p.p'-TDE # 4',4'-D-DDD # RCRA Wate Number U060  # Tetrachlorodiphenylethane # Dichlorodiphenyldichloroethane # Dichlorodiphenyl Dichloroethane # 1,1-Dichloroethane # 1,1-Dichloroethane # 1,1-Dichloroethane # 2,2-bis(p-Chlorophenyl) Ethane # 1,1-bis(4-Chlorophenyl)-2,2-Dichloroethane # 2,2-bis(p-Chlorophenyl)-1,1-Dichloroethane # Benzzene, 1,1'(2,2-Dichloroethyfidene)Bisiq-Chloro-Chlorophenyl-1,1-Dichloroethane # Benzzene, 1,1'(2,2-Dichloroethyfidene)Bisiq-Chloroethyfidene)Bisiq-Chloroethyfidene, Bisiq-Chloroethyfidene, Bisiq-Chl	72548 or 72-548 NIOSH: KJ 070000 SAX: BIM500	Carcinogen		1	53,600	0.0083	<b>V</b> /N	10.0
p.p'-Dichlorodiphenyldichloroethylene  # The p.p'-DDE # 4,4'-DDE # NCI C00555  # DDE # p.p'-DDE # 4,4'-DDE # Dichlorodiphenyldichloroethylene, p.p'- # 2,2'-bis(-Chloropheny)-1,1-Dichloroethylene # 1,1'-(Dichloroethylene # Benzene, 1,1'-Chlorobenzene) # 2,2'-bis(p-Chlorophenyl)-1,1-Dichloroethylene # Benzene, 1,1'-(DichloroethenylideneBis[4-Chloro	72559 or 72-55-9 NIOSH: KV 945000 SAX: BIM750	Carcinogen		l	53,600	0.0059	N/A	10.0

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Except where indicated, values are listed as micro-grams-per-liter (µg/L).	A '' indicates that a Standard has not been adapted or information is currently may allable.	andard has not been a	dapted or information i	s currently unavailable		A '(n)' indicates that a detailed note of evaluation is nevertable	ing note of explan	of the search
D. Hustans	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)	Ш_	(-)		Required
Element / Chemical Compound or Condition	25, 26, (27)	Category (1) (3)	Acute (3)	Chronic (4)	Bioconcentration Factor (BCF) (5)	Human Health Standards	Trigger Value	Reporting
p,p'-Dichlorodiphenyltrichlorochane	50293 or 50-29-3	Carcinogen	0.55	0.001	53,600	0.0059	N/A	90.0
BDDT # 44-DDT # Sprium # Anoflex # Arkotine # Azotox # Bosan Supra # Bovidermol # Chlorophenothan # Chlorophenotoxum # Citox # Chlorophenotoxum # Citox # Chlorophenothane # Diphenyltrichloroethane # Dichlorodiphenyltrichloroethane # Dichlorodiphenyltrichloroethane # Dichlorodiphenyltrichloroethane # University # Dichlorodiphenyltrichloroethane # Dichlorodiphenyltrichloroethane # DichlorophenylpEthane # 11,1-Trichloro-2,2,-bitg-ChlorophenylpEthane # 11,1-Trichloro-2,2,-Dict-ChlorophenylpEthane # 11,1-Trichloro-2,2,-Dict-ChlorophenylpEthane # 1,1-Trichloro-2,2,-Dict-ChlorophenylpEthane # 2,2-Bit-G-ChlorophenylpEthane # 2,2-Bit-G-ChlorophenylpEthane # 2,2-Bit-G-ChlorophenylpEthane # Benzene, 1,1'-C,2,2-Trichloroethane # 2,2-Bit-G-Chlorophenylp-beta, beta,	NIOSH: KJ 322000 SAX: DAD200							<del></del>
1.1-Dichlorochtane  §§ Vinnidene Chloride  § VO. 9, 1.1-Dich CO. 6, 2, 1.1-Dichlorochtene & Vinnidene Chloride  § VO. 9, 1.1-Dichlorochtylene § Ehene, 1.1-Dichloro- § Vinnidene Dichloride § Ehylidene Dichloride § Dichlorochtylene, 1.1- § RCRA Waste Number U076 § Ethylene, 1.1- Dichloro- § Chlorinsted Hydrochlororic Ether	75343 or 75-34-3 NIOSH: KI 0175000 SAX: DFF809	Careinogen	1	1	I		NA	0.5
1,2-Dichlorocchane  \$	107062 or 107-06-2 NIOSH: KI 0525000 SAX: DFF900	Carcinogen	1	1	1.2	8.6	N/A	0.5
1.1.D'chloroethene  §§ Virnylidene Chloride  § Vorylidene Chloride Soonatex § NCI C54262 § 1,1-Dichloroethane  § 1,1-Dichloroethene § Virnylidene Chloride § 1,1-Dichloroethylene  § Virnylidene Dichloride § Ethene, 1,1-Dichloro- § Virnylidene Chloride II § RCRA  Waste Number U078 § Dichloroethylene, 1,1- § Ethylene, 1,1-Dichloro-	75354 or 75-35-4 NIOSH: KV 9275000 SAX: DF1000	Carcinogen	-		5.6	5.7	N/A	0.5
cts-1,2-Dichloroethylene \$ cis-Dichloroethylene \$ cis-1,2-Dichloroethene \$ 1,2-Dichloroethylene \$ cis-1,2-Dichloroethylene \$ 1,2-Dichloroethylene \$ cis-1,2-Dichloroethylene \$ cis-1,2-	156592 or 156-59-2 NIOSH: KV 9420000 SAX: DFIZ00	Toxin			1	02	0.002	0.5
frans-1,2-Dichloroethylene § RCRA Waste Number U079 § trans-1,2-Dichloroethane § trans-1,2-Dichloroethane § trans-1,2-Dichloroethylene § trans-1,2-Dichloroethylene § trans-1,2-Dichloroethylene § 1,2-trans-Dichloroethylene § 1,2-Dichloroethylene, frans-1,2-Dichloroethylene, frans-1,3-Dichloroethylene, frans-1,	156605 or 156-60-5 NIOSH: KV 940000 SAX: DFI600	Toxin	1	1	1.58	100	0.05	0.5

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Except where indicated, values are listed as micro-grams-per-liter (ug/L).	A '' indicates that a Standard has not been adapted or information is currently may allable.	rdard has not been ac	lapted or information is	currently unavailable.		A '(n)' indicates that a detailed note of explanation is provided.	iled note of explan	tion is provided.
3 8	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)		2 10 10		Required
Poliutant Flement / Chemical Compound or Condition	25) (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Factor (BCF) (5)	Human Health Standards (17)	ingger vauve (22)	Value (19)
Dichloromethane (HM)  §§ Methylene Chloride  § R 30 § DCM § Freon 30 § Aerothene MM § NCI CS0102 § Solmethine  § Methylene Chloride § Methane Dichloride § Methylene, Dichloro- § 1,1- Dichloromethane & Methylene Bichloride § Methylene Dichloride	75092 or 75-09-2 NIOSH: PA 805000 SAX: MDR000	Carcinogen		ı	6.9	5	N/A	0.5
2,4-Dichloropbenol ## # DCP # 2,4-DCP # NCI C55345 # Dichlorophenol, 2,4- # Phenol, 2,4-Dichloro- # RCRA Waste Number U081	120832 or 120-83-2 NIOSH: SK 8575000 SAX: DFX800	Hermful	1	-	40.7	0.3 <b>છ</b>	N/A	10
2.4-Dichlorophenoxyacetic Acid  § 2.4-D § Salvo § Phenox § Farmco § Amidox § Miracle § Agrotect § 2.4-D § Salvo § Phenox § Farmco § Amidox § Miracle § Agrotect § Weedrol § Herbidal § Ded-Weed § Lawn-Keep § Fernimine § Crop Rider § Aqua-Kleen § Dichlorophenoxyacetic Acid § 2.4-Dichlorophenoxy Acetic Acid § Dichlorophenoxyacetic Acid § Lakeic Acid (2.4-Dichlorophenoxy).	94757 or 9475-7 NIOSH: AG 6825000 SAX: DFY600	Toxin			ı	0,0	0.2	-
1,3-Dichloropropane  \$	78875 or 78-87-5 NIOSH: TX 9625000 SAX: DGF600	Toxin	1	1	4.11	0.52	0.01	0.5
1.3-Dichloropropene  # Telone # NCI CC3985 # Vidden D # Dichloropropene # a-Chloroallyl Chloride  # Telone # NCI CC3985 # Vidden D # Dichloropropene # a-Chloroallyl Chloride  # Y-Chloroallyl Chloride # Dichloropropene, 1.3- # 1.3-Dichloro- # 1.3-Dichloro-2-Propene # Propens, 1,3-Dichloro- # Telone II Soil Fumigant # 3-Chloropropenyl Chloride # alpha_gamma-Dichloropropylene	542756 or 542-75-6 NIOSH: UC 8310000 SAX: CEF750	Toxin	1	!	1.91	01	9.5	0.5
cie-1,3-Dichloropropene  # Telone II  # 1,3-Dichloropropene  # 1,3-Dichloropropylene  # (Z)-1,3-Dichloropropene  # cie-1,3-Dichloropropylene  # 1-Propene, 1,3-Dichloropropylene	10061015 or 10061-01-5 NIOSH: UC 8325000 SAX: DGH200	Toxin			1.91	01	0.01	0.5
trass-1,3-Dichloropropene § 1,3-Dichloropropylene § (E)-1,3-Dichloropropene § trans-1,3-Dichloropropylene § 1-Propene, 1,3-Dichloropropylene § 1-Propene, 1,3-Dichloro-, (E)-	10061026 or 10061-02-6 NIOSH: UC 8320000 SAX: DGH000	Toxin		1	1.91	01	0.05	0.5

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Pollutent	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)				Required
Element / Chemical Compound or Condition	(25) (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Bioconcentration Factor (BCF) (5)	Human Health Standards	Trigger Value	Reporting
Dieddrin  § 14—  § Avir § Quintox § Octalox § Illoxol § Dieddrex § NCI C00124 § Dieldrie  § SIA 045001 § RCRA Waste Number P037 § 1,45,8-Dimethanonaphthalene  § Hexachloroegoxyoctahydro-endo,exto-Dimethanonaphthalene  § 14,5,6,9,9-  Hexachloroefox,22,4,5,6,6,4,7,7-octalydro-2,713,6-Dimethanonaphthalene  § 2,7,3-6,9-Dimethanonaphthalene  § 2,7,3-6-Dimethanonaphthalene  § 2,7,3-6-Dimethanonaphthalene  § 2,7,3,8-Dexachloro-6,7-Epoxy-1,4,4,8,5,6,7,8,8-Octalydro-  Endo,Exo-1,4,5,8-Dimethanonaphthalene	60571 or 60-57-1 NIOSH: 10 175000 SAX: DHB400	Carcinogen	1.25	0.0019	4,670	0.0014	N/A	0.02
Dietbyl Phthalate  \$8	84662 or 84-66-2 NIOSH: TI 1050000 SAX: DIX000	Toxin	1	l	73	23,000	0.25	0.25
Dimethyl Phthalate  # —  # Dimethyl Phthalate  # Dimethyl Briting M # Methyl Phthalate # Dimethylphthalate # Phthalic Acid, Dimethyl Exter # Dimethyl Bertzene-o-Dicarboxylate # Dimethyl L2.  Bertzenedicarboxylate # 1,2-Bertzenedicarboxylate A Dimethyl Exter	131113 or 131-11-3 NIOSH: TI 1575000 SAX: DTR200	Toxin	•	1	36	310,000	0.04	0.25
2,4-Dimethylphenol  # # m-Xylenol # 2,4-Xylenol # 4,6-Dimethylphenol # Carwell Number 907A # L-Xylenol # Phenol, 2,4-Dimethyl # RCRA Warto Number U101 # 1-Hydroxy-2,4-Dimethylbenzeno # 4-Hydroxy-1,3-Dimethylbenzeno # EPA Pesticide Chemical Code 086804	105679 or 105-67-9 NIOSH: ZE 560000 SAX: XKJ500	Harmful	-		93.8	400	N/A	01
4.6-Dinitro-o-Cresol  \$ \$ Deal \$ Sinox \$ DNOC \$ Arborol \$ Capsine \$ Dinitrol \$ Trifocide \$ Antinonin \$ Winterwash \$ Dinitro-cresol \$ Dinitro-o-Cresol \$ Carwell Number 300 \$ 2.4-Dinitro-o-Cresol \$ Dinitro-o-Cresol, 4.6-\$ \$ o-Cresol, 4.6-dinitro- \$ RCRA Waste Number R047 \$ 2-Methyl-4.6-Dinitrophenol \$ 4.6-Dinitro-2-Methylphenol \$ 2.4-Dinitro-6-Methylphenol \$ 3.5-Dinitro-2- Hydroxytoluene \$ Phenol, 2-Methyl-4.6-Dinitro-	534521 or 534-52-1 Niosh: ao 962800 SAX: dut400	Toxin	1			£1	16	8
3.4-Dimitrophenol  14—  19—  1 Nitro 1 Aldifen 1 Kleenup 1 2.4-DNP 1 Chemox PE 1 Maroxol-50  1 Solfo Black B 1 alpha-Dinitrophenol 1 Dimitrophenol, 2.4-1 Phenol, 2.4-Dinitro-  1 Tetroauphur Black PB 1 RCRA Warte Number P048 1 1-Hydroxy-2.4-Dinitrobenzene	51285 or 51-28-5 NIOSH: SL 2800000 SAX: DUZ000	Toxin	1	I	1.5	07	<u>e</u>	8

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Political and	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)				Required
Element / Chemical Compound or Condition	25. (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Bioconcentration Factor (BCE) 40	Ruman Realth Standards	Trigger Value	Reporting
2,4-Dinitrotolaene	1 121142 or 121-14-2	Caminosan			6 / 100		1	v aune (19)
i ==	NIOSH: XT 1575000	nagoura r		1	3.0	I:I	V/V	01
\$ 2,4 DNT \$ NCI C01865 \$ 2,4-Dinitrotoluol \$ Toluene, 2,4-Dinitro-	SAX: DVH000							
§ RCRA Waste Number U105 § Benzene, 1-Methyl-2,4-Dinitro-								
2,6-Dinitrotoluene	606202 or 606-20-2	Toxin	-	-			100	
	NIOSH: XT 1925000					I	10:01	1
§ 2,6-DNT § 2-Methyl-1,3-Dinitrobenzene § RCRA Waste Number U106	SAX: DVH400							
Dinoseb	88857 or 88-85-7	Torin				-		
-	NIOSH: SJ 9800000				ı	•	6.19	1.5
# DNBP # DBNF # Aretit # Basanite # Caldon # Sparic # Kiloseb # Spurge	SAX: BRES00							
# Premerge # Dinitro # Hel-Fire # SHA 037505 \$ Dow General # Sinox General								
§ RCRA Warte Number P020 § Dow General Weed Killer § Vertac General Weed								
Killer § 2-sec-Butyl-4,6-Dinitrophenol § Dinitro-Ortho-Sec-Butyl Phenol								
12-(1-Methylpropy))-4,6-Dinitrophenol 1 4,6-Dinitro-2-(1-Methyl-n-Propy))Phenol								
# Phenol, 2-(1-Menylpropyl)-4,0-Dintro-								
Dioxin	1746016 or 1746-01-6	Carcinogen	-	ì	2,000	0.00000003	A/N	-
— <del>**</del>	NIOSH: HP 3500000							•
# TCDD # TCDBD # NCI C03714 # Dioxine # Tetradioxin # 2,3,7,8-TCDD	SAX: TAI000							
§ 2,3,7,8-Tetrachlorodibenzo-p-Dioxin § 2,3,7,8-Tetrachlorodibenzo-1,4-Dioxin								
B Dibenzo[b,e][1,4]Dioxin, 2,3,7,5-Tetrachloro-								
1,2-Diphenyfbydrazine	122667 or 122-66-7	Carcinogen	i		24.9	0.4	N/A	9
	NIOSH: MW 2625000	ı					-	2
§ Hydrazobenzene § NCI C01854 § N,N'-Bianiline § Benzene, Hydrazodi-	SAX: HHG000							
§ RCRA Weste Number U109 § (sym)-Diphenylhydrazine § Diphenylhydrazine, 1,2-								
# Hydrazine, 1,2-Diphemyl-								
Diquat	\$5007 or \$5-00-7	Toxin	-			92	0.44	9
	NIOSH: JM 5690000					1	<b>.</b>	_
§ Actor § Feglox § Deiquat § Regione § Aquacide § Dextrone § Paraquat	SAX: DWX800					- 200		
§ Preeglove § SHA 032201 § Weedtrine-D § Diquat Dibromide § Ethylene								
Dipyridylium Dibromide \$ 1,1-Ethylene 2,2-Dipyridylium Dibromide \$ 5,6-Dihydro-								
Dipyrido(1,2a,1c)Pyrazinium Dibromide \$ 9,10-Dihydro-Sa,10a-								
Diazoniaphenanthrene(1,1'-Ethylene-2,'-Bipyndyllum)Dibromide					-			

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Pollutions	CASRN, NIOSH and		Aquatic Life Standards (16)	tandards (16)	II			Required
Element / Chemical Compound or Condition	(2) (2) (2)	Category (1) (2)	Acute (3)	Chronic (4)	Bioconcentration Factor (BCF) (5)	Human Health Standards	Trigger Value (22)	Reporting Value (19)
Endosulfan  § NCI C00566 § Malixv § Ensure § Beosit § Endocel § Thiodan § Cyclodan  § NCI C00566 § Malixv § Ensure § Beosit § Endocel § Thiodan § Cyclodan  § Crisulfan § Berzoepin § Thiosulfan § SIA 079401 § Chlorthiepin § RCRA  Waste Number P050 § Endosulfan (mixed isomera) § Hexachlorohexahydromethano  2,4,3-Berzodioxathiepin-3-Oxide § 1,4,5,6,7,7-Hexachloro-5-Norbomene-2,3-  Dimethanol Cyclic Sulfin § 5-Norbomene-2, 3-Dimethanol, 1,45,6,7,7-Hexachloro-  Cyclic Sulfin § 6,7,8,9,10,10-Hexachloro-1,5,5a,6,9,9a-Hexahydro-6,9-Methano-2,4,3-Berzodioxathiepin, 6,7,8,9,10,10-  Hexachloro-1,5,5a,6,9,9a-Hexahydro-, 3-Oxide	115297 or 115-29-7 NIOSH: RB 9275000 SAX: BC7250	Toxin	11.0	9:020	270	<b>9</b>	Trans isomera	isomera
Endosulfau, I §§ — § Thiodan I § Endosulfan-I § Alpha-Endosulfan § alpha-Endosulfan	959988 or 959-98-8 NIOSH: — SAX: —	Toxin	0.11	0.056	270	110	0.014	0.015
Endosulfan, II §§ — § Thiodan II § Endosulfan-II § Beta-Endosulfan § beta-Endosulfan	33213659 or 33213-65-9 NIOSH: — SAX: —	Toxin	0.11	0.056	270	110	0.004	0.024
Endosulfan Sulfate  §§ —  §§ —  § 6.9-Methano-2,3,4-Benzodioxathiepin, 6,7	1031078 or 1031-07-8 NIOSH: SAX:	Toxin	l	I	270	110	0.05	0.05
Endothall  § Hydrothal-47 § Aquathol § SHA 038901 § Accelerate § Tri-Endothal  § Hydrott § Hydrothal-47 Warte Number F088 § 3,6-Endooxobexahydrophthalic  § Endothal Hydout § RCRA Warte Number F088 § 3,6-Endooxobexahydrophthalic  Acid § Pithalic Acid, Hexahydro-3,6-endo-Oxy- § 7-Oxabicyclo(2,2.)Heptane-2,3-  Diearboxylic Acid § 1,2-Cyclohexanedicarboxylic Acid, 3,6-endo-Epoxy-	145733 or 145-73-3 NIOSH: RN 7875000 SAX: EAR000	Toxin	-	1	-	001	-	2
Endrin # NCI C00157 # Endrox # Mendrin # Nendrin # Hexadrin # SHA 041601 # NCI C00157 # Endrox # Mendrin # Nendrin # Hexadrin # SHA 041601 # Compound 269 # RCRA Waste Number P051 # 1,2,3,4,10,10-Hexachloro-6,7-Epoxy-1,4,4(46)5,6,7,8,8a-Octahydro-endo # 3,4,5,6,9,9-Hexachloro-1a,2,a,3,6,6a,7,7a-Octahydro-2,7,3,6-Dimethanomaphil(2,3-b)oxiren # 1,4,5,8-Dimethanomaphilalene, 1,2,3,4,10,10-Hexachloro-6,7-Epoxy-1,4,4a,5,6,7,8,8a-Octahydro-Endo,Endo	72208 or 72-20-8 NIOSH: 10 1575000 SAX: EAT500	Toxin with BCF > 300	60.0	0.0023	3,970	0.76	N/A	0.3
Endrin Aldehyde §§ —	7421934 or 7421-93-4 NIOSH: — SAX: —	Toxin with BCF >300	1	-	3,970	97.0	N/A	0.025
Epichlorobydria  §  § ECH § Epoxy Propane § aEpichlorohydrin § Chloromethyloxinane § RCRA Wate Number U041 § y-Chloropropyleneoxide § 2-Chloropropylene Oxide § Glycerol Epichlonydrin § 2.3-Epoxypropyl Chloride § 1-Chlor-2,3-Epoxypropane § 3-Chlor-1,2-Epoxypropane	106898 or 106-89-8 NIOSH: TX 490000 SAX: CGN750	Carcinogen	I	1	. 1	30	N/A	1

December, 1995 CIRCULA	CIRCULAR WQB-7, MONTANA NUMERIC WATER QUALITY STANDARDS	TANA NUMER	IIC WATER QU	ALITY STAND	ARDS (6)		Page 2	Page 21 of 39 pages
Except where indicated, values are listed as micro-grams-per-liter (1g/L).	A '' indicates that a Standard has not been adapted or information is currently marrallable.	ndard has not been ad	apted or information is	currently mayailable.		A '(n)' indicates that a detailed note of explanation is provided.	illed note of explan	tion is provided.
Pollutent	CASRN, NIOSH and		Aquatic Life Standards (16)	indards (16)				Required
Element / Chemical Compound or Condition	(25) (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Bioconcentration Factor (BCF) (5)	Human Health Standards (17)	Trigger Value (22)	Reporting Value (19)
Ethylbenzene ## - ## - ## - ## Ethylbenzol # Phenylethane # Ethyl Benzene # Benzene, Ethyl Ethyl Benzene # Benzene, Ethyl	100414 or 100-41-4 NIOSH: DA 0700000 SAX: EGP500	Toxin		1	<del>                                     </del>	700	0.002	0.5
1,2-Dibromoethane  § Ethylene Dibromide  § DBE § Nephis § Kopfune § Celmide § E-D-Bee § Soilfune  § DBE fune fune for Dowfune 40 § SHA 042002 § Pertnaster § Soilbrom-40  § Dibromoethane § Ethylene Bromide § Glycol Dibromide § 1,2-Dibromoethane  § Dibromoethane, 1,2- § 1,2-Ethylene Dibromide § RCRA Waste Number U067	106934 or 106-93-4 NIOSH: KH 9275000 SAX: EIY500	Carcinogen	ı			0.05	N/A	0.5
Fluoranthease  # idryl # Benzo(k)Fluorene # Benzo(j,k)Fluorene # 1,2-Benzacenaphthene # RCRA Wate Number UI20 # 1,2-(1,8-Naphthylene)Benzene # Benzene, 1,2-(1,8- Naphthalenedty)-	206440 or 206.44-0 NIOSH: LL 4025000 SAX: FDF000	Toxin with BCF > 300			1,150	300	N/A	01
Figurese (PAH)	86737 or 86-73-7 NIOSH: — SAX: —	Carcinogen	_	_	30	13,000	N/A	0.25
Fluorine  # Fluoride  # Fluoride  # Fluoride # Fluoride # Fluoride fon # Fluorine, Ion # Soluable  Fluoride # RCRA Waste Number P056 # Hydrofluoric Acid, Ion(1-)	7782414 or 7782-41-4 NIOSH: LM 6475000 SAX: FEZ000	Toxin	_	-	_	4,000	۶	001
Fineride ## Flourine # Fluoride # Fluoride # Fluoride Ion # Fluorine, Ion # Solusble Fluoride # RCRA Wests Number P056 # Hydrofluoric Acid, Ion(1-)	1698448 or 1698448-8 NIOSH: LM 6290000 SAX: FEX875	Toxin			_	4,000	S	100
Gamma Bmitters (16)	Multiple	Carcinogen / Radioactive		1	-	40 mrem ede/yr	N/A	_
Gases, dissolved, total-pressure (39)	Multiple	Toxin	_	110% of saturation	-	1	1	_
Glyphocate  # # Jury # Honcho # Rattler # Weedoff # Roundup # Glifonox # n-(Phosphonomethyl)-Glycine # Glycine, n-(Phosphonomethyl)- # Glyphocate plus # inert ingrediant # MON 0573	1071836 or 1071-83-6 NIOSH: MC 1075000 SAX: PHA500	Toxin		I		700	90	જ
Gtybosate Isopropylamine Salt \$\$ — \$ SHA 103601	38641940 or 38641-94-0 Toxin NIOSH: SAX:	Toxin		1	1	700	9	88

December, 1995 CIRCUL	CIRCULAR WQB-7, MON	TANA NUME	', MONTANA NUMERIC WATER QUALITY STANDARDS (6)	UALITY STANI	JARDS (6)		Page	Page 22 of 39 mage
Except where indicated, values are listed as micro-grams-per-liter (ag/L).	A '' indicates that a Standard has not been adapted or information is currently unavailable.	indard has not been	adapted or information	s currently unavailable		A '(n)' indicates that a detailed note of errdanation is unweighted	iled note of emlans	tion is provided
Pollutent	CASRN, NIOSH and		Aquatic Life Standards (16)	landards (16)	1			Required
Element / Chemical Compound or Condition	(25) (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Bioconcentration Factor (BCF) (5)	Human Health Standards	Trigger Value	Reporting
Guthion  § 19—  § 19—  § 19	86500 or 86-50-0 NIOSH: TE 192500 SAX: ASH500	Toxin	1	10.01	1		:	
Hardness, total	N/A	Narrative (15)	I				N/A	1,000
Heptachlor  § 4—  § NCCCO180 § Drinox § Heptamul § Agroceria § Heptagran § SHA 04481  § Rodischlor § Velsicol-104 § RCRA Warts Number P059 § 3,4,5,6,7,8,8- heptachlorodicyclopentatione § Dicyclopentatione, 3,4,5,6,7,8,8-Heptachloro-3,4,7,7-arTentahydro-4,7-Methanol-IH-Indene § 4,7- Methano-IH-Indene 1,4,5,6,7,8,8-Heptachloro-3,4,7,7-arTentahydro-4,7-Methanol-IH- § 1(3),4,5,6,7,8,8-Heptachloro-3,4(1),7,7-Tertahydro-4,7-Methanolindene	76448 or 76.44.8 Niosii: PC 070000 SAX: HAR000	Carcinogen	0.26	0.0038	11,200	1200.0	N/A	0.2
Heptachlor Epoxide  § 1—  § HCE  § 1.4,5,6,7,8,8-Heptachloro-2,3-  Epoxy2,3,3s,4,7,7-Hextahydro-4,7-Methanoindene § 2,5-Methano-2H- Indeno[1,2b]Oxirene, 2,3,4,5,6,7,7-Heptachloro-1s,1b,5,5s,6,6s-Hexahydro- (alpha, beta, and gamma isomers)	1024573 or 1024-57-3 NIOSH: PB 9450000 SAX: EBW500	Carcinogen	0.26	0.0038	11,200	0.001	NA	0.1
Hezachlorobenzene  # —  # HCB # Amatin # Smut-Go # Sanocide # Anticarie # Bunt-Cure # Bunt-No- More # Perchlorobenzene # Phenyl Perchloryl # No Bunt Liquid # Julin's Carbon Chloride # Co-op Hexa # Hexa C.B. # Benzene, Hexachloro-	118741 or 118-74-1 NIOSH: DĄ 2975000 SAX: HCC500	Carcinogen	-		8,690	0.0075	N/A	0.2
Herachlorobutadene  # ——— # HCBD # Dolan-Pur # Perchlorobutadiene # RCRA Watte Number U128 # 1,3-Hexachlorobutadiene # 1,3-Butadiene, Hexachloro- 1,3-Butadiene # 1,3-Butadiene, 1,1,2,3,4,4-Hexachloro-	87683 or 87-68-3 NIOSH: EJ 0700000 SAX: PCF000	Carcinogen	1 .	ı	2.78	4.4	NA	10
Herachlorocycloherane  # Howachlorocycloherane # BHC # DBH # HCH # HCCH # HEXA # Hexylan # Hexachlor # Gammexane # Hexachloran # Compound 666 # Berzenehexachloride # Berzene Hexachloride	608731 or 608-73-1 NIOSH: QV 3150000 SAX: BBP750	Carcinogen	1	1	130	0.039	N/A	0.1

December, 1995 CIRCULA	CIRCULAR WQB-7, MONTANA NUMERIC WATER QUALITY STANDARDS	FANA NUMER	NC WATER OF	JALITY STANI	ARDS (6)		Page .	Page 23 of 39 pages
Except where indicated, values are listed as micro-grams-per-liter (12g/L).	A '' indicates that a Standard has not been adapted or information is currently unavailable.	dard has not been ac	lapted or information is	currently unavailable.		A '(n)' indicates that a detailed note of explanation is provided	niled note of explan	tion is provided.
Bellia	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)		The Court Court of	T-trace Value	Required
routtan Element / Chemical Compound or Condition	25. (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Factor (BCF) (5)	numan neath Standards (17)	1 ngger value (22)	Value (19)
alpha-Herachlorocycloherane  # —  # Berzene Hezeloride-a-isomer # a-BHC # alpha-BHC # HCH-alpha # alpha- # Berzene Hezeloride-a-isomer # alpha-Hezelorocyclohexane # alpha-Berzenebteszeloride # Hexachlorocyclohexane-alpha # alpha-Hexachlorocyclohexane # Berzene Hexachloride-alpha-isomer # alpha-12.13.45.6-Hexachlorocyclohexane # Cyclohexane, alpha-12.34.56-Hexachlorocyclohexane # Cyclohexane, Hexachlorocyclohexane # Cyclohexane, alpha-12.34.56-Hexachlorocyclohexane Hexachlorocyclohexane # Cyclohexane, alpha-12.34.56-Hexachlorocyclohexane # Hexachlorocyclohexane # Cyclohexane, alpha-12.34.56-Hexachlorocyclohexane # Hexachlorocyclohexane # Cyclohexane # Hexachlorocyclohexane # Hexachlorocyclohe	319846 or 319-84-6 NIOSH: GV 3500000 SAX: BBQ000	Carcinogen	ı		130	0.039	N/A	0.1
beis-Herachlorocycloberane  § 6-BHC § bets-BHC § HCH-beta § bets-HCH § 6-Lindane § bets-Lindane  § 6-BHC § bets-BHC § HCH-beta § bets-HCH § 6-Lindane § bets-Lindane  § bets-Hexachlorocyclohexane, bets § \$ farms-alpha-Berzzenebexachloride  § Berzzenebezzene, pets. § \$ farms-alpha-Berzzenebexachloride, trans-alpha- § bets-1,2,3,4,5,6-Hexachlorocyclohexane  § Cyclobexane, 1,2,3,4,5,6-Hexachlorocyclohexane  § \$ Cyclobexane, 1,2,3,4,5,6-Hexachlorocyclohexane  § \$ Cyclobexane, 1,2,3,4,5,6-Hexachlorocyclohexane  § \$ Cyclobexane, 1,2,3,4,5,6-Hexachlorocyclohexane  § \$ 2-bets, 3-alpha, 4-bets, 5-alpha, 6-bets)-	31987 or 319-85-7 NIOSH: GV 4375000 SAX: BBR000	Carcinogen	•	I	130	0.14	<b>Y</b> Z	
deita-Rerachiorocyclobezane  \$ 6.00	319868 or 319-86-8 NIOSH: GV 455000 SAX: BFW500	Toxin		1	130		0.009	0.1
gamma-herachlorocycloherane  § Lindane  § Indane  § TBHC § T-BHC § Gamene § Lintox § Lentox § Hexcide § Aparain  § Agrocide § Acficide § BHC-gamma § gamma-BHC § HCH-gamma § gamma-HCH § I Hexachlorocyclohexane § gamma-Berzachloride § Reachlorocyclohexane gamma § Hexachlorocyclohexane (gamma) § Berzace Hexachloride gamma-isomne § gamma-i.2.3,4.5.6-Hexachlorocyclohexane § Cyclohexane, 12.3,4.5.6-Hexachlorocyclohexane § Cyclohexane, 12.3,4.5.6-Hexachlorocyclohexane § Cyclohexane, 12.3,4.5.6-Hexachlorocyclohexane § Exachlorocyclohexane § Lapha-2-alpha, bebas, 4-alpha, 3-alpha, 3-alpha, 3-alpha, 3-alpha, 3-alpha, 3-alpha, 5-alpha, 5-alpha, 6-beal	58899 or 58-89-9 NIOSH: GV 490000 SAX: BBQ500	Carvinogen		80'0	130	0.19	<b>₹</b> Ż	1.0
Hexachlorocyclopentadiene ## — NIOSH: 07 77 474 or 77 474  # HEX # HEX # HCP # PCL # C-56 # HCCPD # NCI C55607 # Hexachloropentadiene SAX: HCE500 # RCRA Wate Number UI30 # Perchlorocyclopentadiene # 1,3-Cyclopentadiene, 12.3.4,5,5-Hoxachloro-	77474 or 77-47-4 NIOSH: GY 1225000 SAX: HCE500	Harmful	-	1	4.34	1	<b>V</b> /V	_

December, 1995 CIRCUL	CIRCULAR WQB-7, MONTANA NUMERIC WATER OUALITY STANDARDS	TANA NUME	RIC WATER OF	UALITY STAN	DARDS (6)		, 6	000
Except where indicated, values are listed as micro-grams-per-liter (ag/L).	A '' indicates that a Standard has not been adapted or information is currently unavailable.	andard has not been a	dapted or information is	s currently unavailable		A '(a)' indicates the state of a	rage	rage 24 of 39 pages
	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)		(a) mucates mat a uct	men note of expens	D
Element / Chemica	SAX Numbers (25) (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Bioconcentration	Human Health Standards	Trigger Value	Reporting
Herachlorochane  19 —  1	67721 or 67-72-1 NIOSH: KI 4025000 SAX: HC1000	Carcinogen	-		86.9	(1)	N/A	Value (19)
Hydrogen Salfide  ### Stink Damp # Sulfur Hydride # Hydrogen Sulphide # Dihydrogen Sulfide # Hydrosulfuric Acid # Sulfurated Hydrogen # RCRA Wate Number U135 # Dihydrogen Monomlifide # Hydrogen Sulfuric Acid	7783064 or 7783-06-4 NIOSH: MX 1225000 SAX: HIC500	Тохіп	1	2		1	200	200
Indeno(1,2,3-d)pyrene (FAB)  § 0-Thenylenepyrene § 2,3-Phenylenepyrene § 2,3-Phenylenepyrene § RCRA Waste Number U137 § Indeno (1,2,3-cd) Pyrene § 1,10-(o-Phenylene)Pyrene § 1,10- (1,2-Thenylene)Pyrene	193395 or 193-39-5 NIOSH: NK 9300000 SAX: IBZ000	Carcinogen	ı	1	30	0.044	N/A	0.5
lodine (19) 88 I	lodine 129 15046841 or 15046-84-1 NIOSH: — SAX: —	Carcinogen / Radioactive	1			40 mrem ede/yr	N/A	1
lodine (19) 88 I	lodine 131 10043660 or 10043-66-0 NIOSH: — SAX: —	Carcinogen / Radioactive	-			40 mrem ede/yr	NA	
lodine (10)	lodine 133 — NIOSH: — SAX: —	Carcinogen / Radioactive	1		1	40 mrem ede/yr	V/V	
from (9) ## Fo # Ancor EN 80/150 # Carbonyl Iron # Armeo Iron	7439896 or 7439-89-6 NIOSH: NO 4565500 SAX: ICK800	Karmful	•	1,000		300	N/A	10
## Isoforon # NCI C55618 # Isoscetophorone # alpha-Isophorone # 1.1,3-Trimethyl- 3-Cyclohexene-5-One # 3,5,5-Trimethyl-2-Cyclohexene-1-One # 3,5,5-Trimethyl-2-Cyclohexone		Carcinogen	I	I	4.38	360	N/A	01
Lead (9) 4 Pb 4 C.I. 77575 \$ C.I. Pigment Metal 4 \$ Glover \$ Lead Flake \$ Lead 22 \$ Omaha \$ Omaha & Grant \$ \$1 \$ \$0	743921 or 7439-92-1 NIOSH: OF 7525000 SAX: LCF000	Toxin	82 @ 100 mg/l hardness (12)	3.2 <b>©</b> 100 mg/l hardness (12)	49	15	0.1	3

December, 1995 CIRCULA	CIRCULAR WQB-7, MON	FANA NUMER	UC WATER Q	MONTANA NUMERIC WATER QUALITY STANDARDS	ARDS (6)		Page 2	Page 25 of 39 pages
Except where indicated, values are listed as micro-grams-per-liter (ag/L).	A '' indicates that a Standard has not been adapted or information is currently unavailable	idard has not been ad	apted or information i	s currently unavailable.		A '(a)' indicates that a detailed note of explanation is provided.	iled note of explans	tion is provided.
D. Hadama	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)				Required
Element / Chemical Compound or Condition	(25) (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Factor (BCF) (5)	numan nealth Standards (17)	1 ngger value (22)	Value (19)
Malathion ## Malathion   Forthion   Malacide   Kop-Thion   Formal   Sumitox   Emmatos   Celthion   Forthion   Malacide   Kop-Thion   Calmathion   Carbechoxy Malathion   S.H.A.   OS7701   Phosphothion   S.H.2-Bia(Ethoxycarbony))Ethyl-O,O-Dimethyl Thiophosphate   O.O-Dimethyl-S-(1.2-Dicarbechoxyethyl) Dithiophosphate   O.O-Dimethyl S-1.2-Dicarbechoxyethyl) Dithiophosphate   O.O-Dimethyl S-1.2-Dicarbechoxyethyl) Display   S.H.C.   Dicarbechoxyethyl Phosphorodithioate   Succinic Acid, mercapto-, diethyl eater, S.Ener with O.O-Dimethyl Phosphorodithioate	121755 or 121-75-5 NIOSH: WM 840000 SAX: CBP000	Toxin		0.1		I	I	
Manganese (9) ## Mn # Colloidal Manganese # Magnacat # Tronamang	7439965 or 7439-96-5 NIOSH: OO 9275000 SAX: MAP750	Harmful		-	1	\$0	V/V	8
Mercury (9)  14 Hg  1 Colloidal Mercury \$ Mercury, Metallic \$ NCI C60399 \$ Quick Silver \$ RCRA  Waste Number U151	7439976 or 7439-97-6 NIOSH: OV 455000 SAX: MCW250	Toxin with BCF > 300	2.4	0.012	5,500	0.14	N/A .	0.6
Methoxychlor ## — Methoxide # NCI C00497 # Methoxy-DDT # DMDT # Methoxy-DDT # Dimethoxy-DDT # RCRA Warte Number U247 # 1,1,1-Trichloro-2,2-Bis(p-Methoxypheny)/Ethane # Benzene, 1,1'-(2,2,2-Trichloro-chylidene)/Bis(4-Methoxypeny)/Bis(p-Methoxypheny)/Bis(p-Methoxypheny)-# I,1'-(2,2,2-Trichloro-chylidene)/Bis(p-Methoxypheny)-# Bis(p-Methoxypheny)-# Bis(	72435 or 72-43-5 NIOSH: KJ 3675000 SAX: DOB400	Toxin	ı	0.03	I	07	0.04	
Methyl Chloride # Chloromethane # Acris: # Monochloromethane # RCRA Waste Number U045	74873 or 74-87-3 NIOSH: PA 6300000 SAX: CHX500	Toxin		-	3.75	1	80.0	1
Miret  NCI C06428 § Dechlorane § Bichlorendo § Ferriamicide  § Perchloropentacyclodecane † Dodecachloropentacyclodecane § Perchloropentacyclodecane † Dodecachloropentacyclodecane § Hexachloropentacyclodecane † Cyclopentaciene; Hexachloro, Dimer § Perchloropentacyclode, 2.1.0 (nup 2,6],0 (laup 3,9],0 (laup 5,8);Decane § Dodecachloroccathydro-1,3,4-Metheno-2H-Cyclobuta (c,0)Pentalene § 1,1a,2,2,3,3,4,4,5,5,5,8,6,0,6,-Dodecachloroccathydro-1,3,4-Metheno-1H-Cyclobuta[cd]Pentalene § 1,3,4-Metheno-1H-Cyclobuta[cd]Pentalene, 1,1a,2,2,3,3a,4,5,5a,5a,5b,6,-Dodecachloroccathydro-	2385855 or 2385-85-5 NIOSH: PC 8225000 SAX: MQW500	Toxin	4	100'0	1	1	10.0	0.1
Naphthalene  # —  # —  # Moth ISO # NCI C52904 # Naphthene # White Tar # Moth Balls # Mighth ISO # Tar Camphor # Carwell Number 587 # RCRA Waste Number U165 # EPA Pesticide Chemical Code 055801	91203 or 91-20-3 NIOSH: QJ 0525000 SAX: NAJ500	Toxin	_	1	10.5	. 1	0.04	01

December, 1995 CIRCUL	CIRCULAR WQB-7, MONTANA NUMERIC WATER QUALITY STANDARDS	TANA NUME	RIC WATER QU	UALITY STANI	JARDS (6)		Page	Page 26 of 39 pages
Except where indicated, values are listed as micro-grams-per-liter (µg/L).	A '' indicates that a Standard has not been adapted or information is currently unavailable.	ındard has not been s	idapted or information is	s currently unavailable		A '(n)' indicates that a detailed note of explanation is provided.	ailed note of explan	ation is provided
Pollutant	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)	1			Required
Element / Chemical Compound or Condition	(25) (29) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Factor (BCF) (5)	Human Health Standards	Trigger Value	Reporting Value (19)
Nickel (9) §§ Ni § C.I. 77775 § Ni 270 § Nickel 270 § Ni 0901-S § Ni 4303T § NP 2 § Raney Alloy § Raney Nickel	7440020 or 7440-02-0 NIOSH: QR 5950000 SAX: NCW500	Toxin	1,400 @ 100 mg/l hardness (12)	160 @ 100 mg/l hardness (12)	47	100	0.5	20
Nitrate (as Nitrogen[N]) §§ NO,	14797558 or 14797-55-8 NIOSH: — SAX: —	Toxin	6	9		10,000	10, Surface 2,500, Ground	01
Nitrite (as Nitrogen[N]) §§ NO,	14797650 or 14797-65-0 Toxin NIOSH: — SAX: —	Toxin	(9)	<b>(9)</b>		1,000	4	01
Nitrate plus mitrite (as Nitrogen[N]) §§ NO, + NO,	17778880 or 17778-88-0 Toxin/Harmful NIOSH: — SAX: —	Toxin/Harmful	(g)	(9)	1	10,000	10, Surface 2,500, Ground	01
Nitrobenzese \$\$ \$ NITOBER OI \$ Nitroberzol \$ OI of Mirbane \$ Berzene, Nitro- \$ Estence of Myrbane \$ RCRA Watte Number U169	98953 or 98-95-3 NIOSH: DA 6475000 SAX: NEX000	Toxin			2.89	17	1.9	10
e-Nitrophenol \$4 \$2.Hydroxynitrobenzene	88755 or 88-75-5 NIOSH: SM 2100000 SAX: NIE500	Toxin	-	l	2.33	. 1	0.45	
4-Nitrophesol §§ – 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	100027 or 100-02-7 NIOSH: SM 2275000 SAX: NIF000	Toxin	_	_	3.31	. 1	2.4	1
N-Nitrosodi-N-Propylamine  § 19 —  § DPNA § DPNA § Dipropylnitrosamine § N-Nitrosodipropylamine  § DP-Propylnitrosamine § RCRA WAste Number UIII § Dipropylamine, N-Nitrosodi-propylamine § N-Nitrosodi-propylamine § N-Nitrosodi-propylamine § N-Nitrosodi-Nitroson-Propyl-	621647 or 621-64-7 NIOSH: JL 9700000 SAX: DWU600	Carcinogen	I	I	1.13	50'0	NIA	01
N-Nitrosodimethylamine  § Dimethylnitrosomine  § DMN § NDMA § DMNA § Nitrosodimethylamine § Dimethylnitrosomine  § N-Nitrosodimethylamine § RCRA Waste Number F082 § N.N-Dimethylnitrosamine  § Methylamine, N-Nitrosodi § Dimethylamine, N-Nitroso- § N.Methyl-N-  Nitrosomethanamine § Methamine, N-Methyl-N-Nitroso- § Methanamine, N-Methyl-N-  Nitroso-	62759 or 62-75-9 NIOSH: IQ 6255000 SAX: DSY400	Carcinogen	1	1	0.026	6900'0	N/A	01

December, 1995 CIRCUL	CIRCULAR WQB-7, MONTANA NUMERIC WATER QUALITY STANDARDS	TANA NUMER	UC WATER QI	JALITY STAND	ARDS (6)		Page .	Page 27 of 39 pages
Except where indicated, values are listed as micro-grams-per-liter (ag/L).	A '' indicates that a Standard has not been adapted or information is currently unavailable.	ndard has not been ac	lapted or information is	currently unavailable.		A '(n)' indicates that a detailed note of explanation is provided.	iled note of explan	tion is provided.
Polltrent	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)		1 17 14		Required
Element / Chemical Compound or Condition	(25) (24) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Factor (BCF) (5)	numan neatin Mandarus (17)	ingger value (22)	Value (19)
N-Nitrosodiphenylamine  1	86306 or 86-30-6 NIOSH: JJ 980000 SAX: DWI000	Carcinogen		ı			N/A	01
N-Nitrosopyrrolidese  # —  RNA  RNA  RNA  RNA  RNA  RNA  RNA  REA  RNA  RN	930552 or 930-55-2 NIOSH: UY 1575000 SAX: NLP500	Carcinogen			0.055	0.17	N/A	01
Odor (13)	N/A	Harmful	-		_		V/N	-
Ozamyl  # D-1410 # DPX 1410 # Insecticide-Nematicide 1410 # Vydate # Thioxamyl # D-1410 # DPX 1410 # Insecticide-Nematicide 1410 # Vydate # Thioxamyl # Methyl 2-(Dimethylamino)-N- # Vydate L, Insecticide-Nematicide # ([Methylamino]Carbonyl]Oxy)-2-Oxoethanimidothioate # 2-Dimethylamino-I- (Methylathino)Glyoxal O-Methylaricanoylmonozime # 5-Methyl I-Dimethylcarbamoyl)-N- ([Methylcarbamoyl]Oxy)-I-Thioxamimidate # Mri,N'-Dimethyl-N- [(Methylcarbamoyl)Oxy)-I-Thioxamimidate # N',N'-Dimethyl-N- [(Methylcarbamoyl)Oxy)-I-Methylthioxamimidie Acid	23135220 or 23135-22-0 NIOSH: RP 2300000 SAX: DSP600	Toxin		1		200	-	-
Oxygen, dissolved (20)  14 O.  1 Oxygen, Compressed § Oxygen, Refrigerated Liquid	7782447 or 7782-44-7 NIOSH: RS 2060000 SAX: OQW000	Toxin	(61) (61)	(61)		-	S	100
Parathion  §§—  § DNTP § Niran § Phoakii § Paradust § Stathion § Strathion § Peatox Plus § DNTP § Nironigmine § Parathion Ethyl § Parathion-ethyl § Ethyl Parathion § Diethylparathion § Carwell Number 637 § RCRA Waste Number P089 § EPA Pesticide Chemical Code 057501 § Diethyl 4-Nitrophenylphosphosothione § Diethyl para-Nitrophenyl Thiophosphate § Diethyl-p-Nitrophenyl Monothiophosphate § O.O. Diethyl O-A.Wintophenyl Thiophosphate § Phosphorothioic Acid, 0.O-Diethyl O-(4-Nitrophenyl) Exer	56382 or 56-38-2 NIOSH: TF 4920000, dry TF 4950000, liquid SAX: PAKZ60, dry SAX: PAKZ60, liquid		90.0	0.013	ı		90.06	-
Pestachlorobenzene  # -	608935 or 608-93-5 NIOSH: DA 6640000 SAX: PAV500	Toxin with BCF >300	1	1	2,125	3.5	N/A	0.1

December, 1995 CIRCULA	CIRCULAR WQB-7, MONTANA NUMERIC WATER QUALITY STANDARDS (6)	TANA NUMEI	RIC WATER OF	JALITY STANL	DARDS (6)		Page	Page 28 of 39 pages
Except where indicated, values are listed as micro-grams-per-liter (ng/L).	A '' indicates that a Standard has not been adapted or information is currently unavailable.	ndard has not been a	dapted or information is	correctly unavailable.		A '(n)' indicates that a detailed note of explanation is provided.	alled note of explan	ation is provided.
	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)				Required
Pollutant Element / Chemical Compound or Condition	SAX Numbers (25) (26) (27)	Category (1) (3)	Acute (3)	Chronic (4)	Bioconcentration Factor (BCF) (5)	Human Health Standards	Trigger Value	Reporting Value (19)
Pentachlorophenol  \$	87865 or 87-86-5 NIOSH: SM 6300000 SAX: PAX250	Carcinogen	20 <b>@</b> pH of 7.8 (14)	13 @ pH of 7.8 (14)	=	-	N/A	0.05
pH (13)	N/A	Harmful - Surface Narrative - Ground					N/A	
Phenanthrene (PAH)  11 —  1 Phenantrin	85018 or 85-01-8 NIOSH: SF 7175000 SAX: PCW250	Toxin	1	1	30		0.01	0.25
Phenol  \$ Baker's P and S Liquid and Ointment \$ NCI C50124 \$ Benzenol \$ Monophenol  \$ Oxbenzene \$ Phenic Acid \$ Carbolic Acid \$ Phenylic Acid \$ Hydroxybenzene  \$ Hydroxybenzene \$ Phenyl Alcohol \$ Phenyl Hydrate \$ Phenylic Alcohol  \$ Phenyl Hydroxide \$ Benzene, Hydroxy- \$ Monohydroxybenzene \$ RCRA Watte  Number U188	108952 or 108-95-2 NICSH: SI 3325000 SAX: PDN750	Harmful	1		<b>*</b> :	300	NA	01
Phosphorus, inorganic (9) (20) 88 8 Ortho-phosphorus § phosphorus, Ortho-	14265442 or 14265-44-2 NIOSH: SAX:	Harmful	<b>(9)</b>	ව	ı	-		_
Fedoram  # ATCP # K-Fin # Tordon # Borolin # Amdon Grazon # NCI C00237 # Tordon 10K # Tordon 22K # Tordon 101 Mixture # 3,5,6-Trichloro-4-Aminopicolinic Acid # 4-Amino-3,5,6-Trichloropicolinic Acid	1918021 or 1918-02-1 NIOSH: TJ 7525000 SAX: AMU250	Toxin	I	-	1	900	0.14	-
Pyrene (PAH) §§ — § 8-Pyrine § beta-Pyrene § Benzo(def)Phenanthrene § Benzo[def]Phenanthrene	129000 or 129-00-0 NIOSH: UR 2450000 SAX: PON250	Carcinogen	-		30	009'6	N/A	0.25
Radium 226 §§	Redium 226 13982636 or 13982-63-6 NIOSH: — SAX: —	Carcinogen / Radioactive			ı	200 picocuries/liter. Note: The sum of Radium 226 and 228.	N/A	. 1
Radium 228 \$1 —	Radium 228 15262201 or 15262-20-1 NIOSH: — SAX: —	Carcinogen / Radioactive		I		200 picocuries/liter. Note: The sum of Radium 226 and 228.	N/A	1

December, 1995 CIRCUL	CIRCULAR WQB-7, MONTANA NUMERIC WATER QUALITY STANDARDS	TANA NUME	RIC WATER QU	JALITY STANI	DARDS (6)		Page	Page 29 of 39 pages
Except where indicated, values are listed as micro-grams-per-liter (gg/L).	A '' indicates that a Standard has not been adapted or information is currently unavailable.	indard has not been i	idapted or information is	currently unavailable		A '(n)' indicates that a detailed note of explanation is provided.	illed note of explar	ation is provided.
Politicant	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)	IL			Required
Element / Chemical Compound or Condition	(2) (2)	Category (1) (2)	Acute (3)	Chronic (4)	Factor (BCF) (5)	Human Health Mandards (17)	Trigger Value	Reporting Value (19)
Redon 222 18	14859677 or 14859-67-7 NIOSH: SAX:	Carcinogen / Radioactive	ı		-	3000 picocuries/liter	V/V	1
Sediment, settelable solids, olls, grease, or floating solids (19)  \$	N/A	Narrative (13)	I		1		N/A	I
Scientium (9) \$ Solicity Solicidal Scientium \$ Elemental Scientium \$ Scientium Alloy \$ Cal. 77805 \$ Colloidal Scientium \$ Scientium Base \$ Scientium Base \$ Scientium Dust \$ Scientium Elemental \$ Scientium Homopolymer \$ Scientium Metal Powder, Non-Pyrophoric \$ Vandex	7782492 or 7782-49-2 NIOSH: VS 7700000 VS 8310000, colloidal SAX: SBO500 SAX: SBP000, colloidal	Toxin	20	S	9	95	9.0	_
Silver (9) 18 Ag 8 Argentum § C.I. 77820 § Shell Silver § Silver Atom	7440224 or 7440-22-4 NIOSH: VW 3500000 SAX: SDI500	Toxin	4.1 @ 100 mg/l hardness (12)		0.5	-	0.2	6
Smarzine  # CDT # Herbex # Framed # Bitemol # Radokor # A 2079 # Batazina  # CDT # Herbex # Framed # Bitemol # Radokor # A 2079 # Batazina  # CDT # Herbisde  # CET # G 27/692 # Geigy 27,692 # Genarm # Genarop 50  # Simazine 80W # Symazine # Taphazine # W 6658 # Zeapur # Princep  # Aquazine # Herbisdin # Tafazine # 2 -Chloro-4-Chizeline  # I-Chloro-4, Siefethylamino-2.4, & Triazine # 2 -Chloro-4, & Bit(Ethylamino)-1,3,5-  Triazine # 6-Chloro-N, N-Diethyl-1,3,5-Triazine-2,4-Diyldiamine	122349 or 122-34-9 NIOSH: XY 2550000 SAX: BIP000 •	Carvinogen	ı	. 1	I	•	N/N	0.3
Strontium 89 (10) 18	14158271 or 14158-27-1 NIOSH: — SAX: —	Carcinogen / Radioactive			1	40 mrem edelyr. Note: the sum of the dosage from Strontium 89 plus 90 cannot exceed this value.	N/A	1
Streetium 90 (19)	10098972 or 10098-97-2 NIOSH: — SAX: . —	Carcinogen / Radioactive		-		40 mrem ede/yr. Note: the rum of the dosage from Strontium 89 plus 90 cannot exceed this value.	N/A	1
Syrcae  \$ Syrol \$ Cinnamel \$ Cinnamene \$ Cinnamenol \$ NCI CO2200 \$ Syrole  \$ Strol \$ Cinnamol \$ Cinnamene \$ Virgibenzol \$ Phenchylene \$ Phenylethene  \$ Virgibenzene \$ Ethenylbenzene \$ Phenylethylene \$ Benzene, Virgil- \$ Stryene,	100425 or 100-42-5 NIOSH: WL 3675000 SAX: SMQ000	Toxin	1	1	1		0.008	5.0

December, 1995 CIRCULA	CIRCULAR WQB-7, MONTANA NUMERIC WATER QUALITY STANDARDS	TANA NUMEI	RIC WATER QI	JALITY STAND	ARDS (6)		Page 3	Page 30 of 39 pages
Except where indicated, values are listed as micro-grams-per-liter (ag/L).	A '' indicates that a Standard has not been adapted or information is currently unavailable.	ndard has not been a	dapted or information i	currently unavailable.		A '(n)' indicates that a detailed note of explanation is provided.	uled note of explans	tion is provided.
Palledon	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)		3		Required
Flement / Chemical Compound or Condition	(25) (26) (27)	Category (1) (3)	Acute (3)	Chronic (4)	Factor (BCF) (5)	numan nearth Nandards (17)	ingger value (22)	Value (19)
Sulfate §§ SO,	14808798 or 14808-79-8 NIOSH: — SAX: SNS000	Natrative (15)			1	ı	N/A	000'1
Temperature (13)	N/A	Harmful	_	-	1		N/A	ı
1,2,4,5-Tetrachlorobenzene ## # RCRA Wate Number U207 # Tetrachlorobenzene, 1,2,4,5- # Benzene, 1,2,4,5- Tetrachloro-	95943 or 95-94-3 NIOSH: DB 9450000 SAX: TBN750	Toxin with BCF >300	-	-	\$21'1	2.3	NA	0.1
1,1,2,2-Tetrachloroethane  § —  § TCE § Cellon § Westron § Bonoform § Tetrachloroethane  § sym-Tetrachloroethane § RCRA Waste Number U209 § Acetylene Tetrachloride  § TCE § Tetrachloroethane § RCRA Waste Number U209 § Acetylene Tetrachloride  § TCE § Dichloroethane	79345 or 79-34-5 NIOSH: KI 8575000 SAX: ACK500	Carcinogen	-		S	<i>t</i> :1	N/A	0.5
Tetrachloroethylene  § 1  NCI CO4580 § PCE § Perk § PERC § ENMA § Dow-Per § Perchlor  § Perclene § Perklone § Tetra Cap § Percoacles § Perchlorethylene  § Perchloroethylene § Tetrachloroethene § Carbon Bichloride § RCRA Warte Number UZ10 § Ethylene Tetrachloride § Ethylene, Tetrachloroethylene	127184 or 127-18-4 NIOSH: KX 3850000. SAX: TBQ250	Carcinogen		ı	30.6	S	N/A	9.5
Thallium (?) 88 Tl 8 Ranor	7440280 or 7440-28-0 NIOSH: XG 3425000 SAX: TEI000	Toxin	1	. 1	119	1.7	0.3	8
Tolucee  \$	108883 or 108-88-3 NIOSH: XS 2250000 SAX: TGK750	Toxin	Į.	_	10.7	1,000	0.01	0.5
Total dissolved solids (20)  §§ TDS  § Solids, total dissolved	Multiple	Narrative (18)		1		-	N/A	000'01
Toxaphene  14 —  1 Attac 6   Toxakil   Agricide   Chem-Phene 1 Clor Chem T-590   Compound 3956   Crestox   Estonox   Geniphene 1 Clor Chem T-590   Compound 3956   Crestox   Pactor   Penacide 1 GP-Phene   Herules 3956   Melipax   Motox   PCC   Phenacide 1 Phenatox   Toxadust   Camphechlor   Maggot Killer (F)   Toxaphene mixture 1 Chlorinated-Camphene   Camphene, Octachloro-   RCRA Wasta Number P[13]	8001352 or 8001-35-2 NIOSH: XW 525000 SAX: THH750	Carvinogen	0.73	0.0002	13,100	0.0073	NA	

December, 1995 CIRCULAR WQB-7	IR WQB-7, MON	TANA NUMEI	', MONTANA NUMERIC WATER QUALITY STANDARDS	JALITY STANI	DARDS (6)		Page	Page 31 of 39 pages
Except where indicated, values are listed as micro-grams-per-liter (µg/L).	A '' indicates that a Standard has not been adapted or information is currently unavailable.	ndard has not been a	lapted or information is	currently unavailable.		A '(n)' indicates that a detailed note of explanation is provided	illed note of explan	tion is provided.
Pollutant	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)	Ш_			Required
Element / Chemical Compound or Condition	(25) (25) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Bioconcentration Factor (BCF) (5)	Human Health Standards	Trigger Value	Reporting Value (19)
1,2,4-Tricklorobenzene ## - ## Tricklorobenzene # Tricklorobenzene, 1,2,4- # Benzene, 1,2,4-Trickloro-		Toxin			114	70	0.02	0.5
1,1,1-Trichloroethane  1	71556 or 71-55-6 NIOSH: KZ 2975000 SAX: TIM750	Carcinogen		-	5.6	200	N/A	0.5
1,1,2-Trichloroethane  # 6-T  # 1,1,2-Trichloroethane  # 1,1,2-Trichloroethane  # 1,1,2-Trichloroethane  # 1,1,2-Trichloroethane  # Number U227  # Trichloroethane  # Number U227  # Number 875A [NLM]  # EPA Pesticide Chemical Code 081203 [NLM]	79005 or 79-40-5 NIOSH: KJ 3150000 SAX: TINO00	Carcinogen			4.5	5	N/A	0.5
Tricklorochylene  #	79016 or 79-01-6 NIOSH: KX 455000 SAX: TIO750	Carcinogen	1	1	10.6	٧n	N/A	5:0
Trichloroflaoromethane (HM)  # —  # Fill # FC II # Fron II # Acton 9 # Eakimon II # Halocarbon II  # Algofrene Type I # RCRA Wante Number UI2I # Fluorocarbon Number II  # NCI C04637 # Isofron II # Fluoroctrichloromethane # Isofron III # Monofluoroctrichloromethane # Ucon Refrigerant II # Trichloromonofluoromethane	75694 or 75-69-4 NIOSH: PB 6125000 SAX: TIP500	Toxin	1	I	3.75	10,000	0.07	0.5
2,4,5-Trichloropheaol  \$\$	95954 or 95-95-4 NIOSH: SN 1400000 SAX: TIV750	Harmful	•		110	·	N/A	10
2,4,6-Trichlorophenol 81 — 15 Omal & Dowcide 2S § Phenachlor § RCRA Waste Number U231 15 Trichlorophenol, 2,4,6- § Phenol, 2,4,6-trichloro- § NCI C02904	88062 or 88-06-2 NIOSH: SN 1575000 SAX: TTW000	Carcinogen		I	051	21	N/A	10

December, 1995 CIRCULA	CIRCULAR WQB-7, MON	TANA NUMER	, MONTANA NUMERIC WATER QUALITY STANDARDS	ALITY STANE	ARDS (6)		Page 3	Page 32 of 39 pages
Except where indicated, values are listed as micro-grams-per-liter (µg/L).	A '' indicates that a Standard has not been adapted or information is currently unavailable.	ndard has not been a	lapted or information is	currently unavailable.		A '(n)' indicates that a detailed note of explanation is provided	iled note of explans	tion is provided.
D. Had one	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)	i			Required
Element / Chemical Compound or Condition	(25) (20) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Factor (BCF) (5)	Human Health Mandards (17)	trigger value (22)	Value (19)
2 (2.4,5-Trichlorophenoxy) Proprionic Acid  # Construction   Propon   Silver   Aqua-Vex   Ded-Weed   Sta-Fast   2.4,5-TP    # Color-Set   Weed-Boon   Double Strength   RCRA Waste Number U233    # 2.4,5-Trichlorophenoxypropionic Acid   @ QC,4,5-Trichlorophenoxy)Proprionic Acid    # 2.4,5-Trichlorophenoxy)-Proprionic Acid   Trichlorophenoxy Proprionic Acid    # 2.4,5-Trichlorophenoxy)-Proprionic Acid   Trichlorophenoxy Proprionic Acid    G.4,5-F   (+/-)-C,4,5-Trichlorophenoxy)-proprionic Acid	93721 or 93-72-1 NIOSH: UF 8225000 SAX: TIX500	Toxin				9	0.075	0.1
Tribalomethanes, total  §§ § TTHMs	Multiple	Carcinogen	1		-	001	N/A	2
Tritium (19)	10028178 or 10028-17-8 NIOSH: — SAX: —	Carcinogen / Radioactive				40 mrem ede/yr	N/A	1
Turbidity (19) (29) 88	N/A	Harmful					Y/N	ו אדט
Uranium, natural 88 U 8 Uanium Metal, Pyrophoric	7440611 or 7440-61-1 NIOSH: YR 3490000 SAX: UNS000	Carcinogen / Radioactive	-	-	1	300 picocuries per liter.	N/A	
Vinyl Chloride  # V	75014 or 75-01-4 NIOSH: KU 9625000 SAX: VNP000	Carcinogen	1	1	1.17	2	N/A	0.5
Xylenes ##—  # Xylol # Violet 3 # Mixed Xylenes # Methyl Toluene # Dimethylbenzene # RYRA Warte Number UZ39 # NCI C55232 # Total equals the sum of meta, ortho, and para.	1330207 or 1330-20-7 NIOSH: ZE 2100000 SAX: XGS000	Toxin		_	4	10,000	0.5	1.5
Xylenes  # Yalol # Violet 3 # Mixed Xylenes # Methyl Toluene # Dimethylbenzene # RCRA Waste Number UZ39 # Total equals the sum of meta, ortho, and para.	1330207 or 1330-20-7 NIOSH: ZE 2100000 SAX: XGS000	Toxin	**	_		10,000	0.5	1.5
Xylemes ##  # Xylol # Violet 3 # Mixed Xylenes # Methyl Toluene # Dimethylbenzene # RCRA Waste Number UZ39 # Total equals the sum of mets, ortho, and pars.	1330207 or 1330-20-7 NIOSH: ZE 2100000 SAX: XGS000	Toxin	ŀ	-		10,000	0.5	1.5
m-Xylene ## — Xylene # meta-Xylene # m-Dimethylbenzene # m-Methylloluene # 1,3-Dimethylbenzene # 1,3-Dimethyl Benzene	108383 or 108-38-3 NIOSH: ZE 2275000 SAX: XHA000	Toxin	1	I	1	10,000	0.004	1.5

December, 1995 CIRCUL	CIRCULAR WQB-7, MON	TANA NUME	7, MONTANA NUMERIC WATER QUALITY STANDARDS (6)	UALITY STANI	DARDS (6)		Page	Page 33 of 30 mages
Except where indicated, values are listed as micro-grams-per-liter (gg/L).	A '-, indicates that a Standard has not been adapted or information is currently unavailable.	ndard has not been	adapted or information i	s currently unavailable.		A '(n)' indicates that a detailed note of explanation is moved of	ailed note of explan	ation is provided
Pollutant	CASRN, NIOSH and		Aquatic Life Standards (16)	andards (16)	il i			Required
Element / Chemical Compound or Condition	(25) (26) (27)	Category (1) (2)	Acute (3)	Chronic (4)	Bioconcentration Factor (BCF) (9	Human Health Standards	Trigger Value	Reporting
o-Xylene	95476 or 95-47-6	Toxin	1			10.000	1	1 c
	NIOSH: ZE 2450000					200101	400.0	2
\$ o-Xylol \$ 1,2-Xylene \$ ortho-Xylene \$ o-Methylioluene \$ o-Dimethylbenzene \$ 1,2-Dimethylbenzene \$ 1,2-Dimethyl Benzene	SAX: XHJ000							
n. Xylena	105473 - 105 47 3							
	NIOSH: 7E 363600	I OXIU	ı	ı	ŀ	10,000	0.002	1.5
§ p.Xylol § Chromar § Scintillar § 1,4-Xylene § para-Xylene § p-Methylloluene § p-Dimethylbenzene § 1,4-Dimethyllbenzene § 1,4-Dimethyll Benzene	SAX: XHS000							
Zinc (9)	7440666 or 7440-66-6	Toxin	120 @ 100 mg/l	110 @ 100med	Į.	900		
\$\$ Zu	NIOSH: ZG 860000		hardness (12)	hardness (12)		oon*r		2
Blue Powder § C.I. 77945 § C.I. Pigment Black 16 § C.I. Pigment Metal 6	SAX: ZBI000		(71)	(71) 8421101811				
# Emanay Zinc Dust # Granular Zinc # Jasad # Merrillite # Pasco # Zinc, Powder								
or Dust, non-Pyrophoric & Zinc, Powder or Dust, Pyrophoric						•		

#### DETAILED NOTES OF EXPLANATION CIRCULAR WQB-7

### Frequently used Acronyms:

Name of Primary Synonym as listed in the EPA's data base IRIS. §§ abc... Name of Additional Synonyms from various sources including IRIS. § abc...

Bio-concentration Factor. BCF

Code of Federal Regulations. CFR

Effective dose equivalent per year. EDE/YR

Environmental Protection Agency. E.P.A. A factor in the formula for determining ammonia Standards for Freshwater Aquatic Life. FPH

A factor in the formula for determining ammonia Standards for Freshwater Aquatic Life. F

Halomethanes. НМ

Method Detection Limit. The MDL is calculated from the standard deviation of replicate measurements, and is defined as the minimum concentration of a substance that can be identified, measured, and reported with 99% confidence that the analyte concentration is greater than zero. MDL

Milli Roentgen-Equivalent-Man. MREM

Not applicable. V/V

Not determined. n.d.

Nephelometric Turbidity Unit. NTO Polynuclear Aromatic Hydrocarbons. PAH

Polychlorinated Biphenyls. PCB

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TCAP A factor in the formula for determining ammonia Standards for Freshwater Aquatic Life.

- Based on EPA's categories and include parameters determined to be to toxic (toxin), carcinogenic (carcinogen), or harmful. Harmful parameters include nutrients, biological agents, and those parameters which cause taste and/or odor effects or physical effects. ε
  - Carcinogens: chemicals classified by EPA as carcinogens for an oral route of exposure; Standards are based upon the incremental risk of causing one additional instance of cancer in one thousand persons. Includes those parameters in classifications A (Human Carcinogen), B1 or B2 (Probable Human Carcinogens), and C (Possible Human Carcinogen) 9
- (3) No sample shall exceed these concentrations.
- (4) No four-day (96-hour) or longer period average concentration shall exceed these values.
- All bioconcentration factors (BCF's) were developed by the EPA as part of the Standards development as mandated by Section 304(a) of the Federal Clean Water Act. Values shown are current as of 07/01/1993. ଡ
- (6) No sample shall exceed these concentrations.

Standards for metals (except aluminum) in surface water are based upon the analysis of samples following a "total recoverable" digestion procedure (Section 9.4, "Methods for Analysis of Water and Wastes", 1983, Environmental Monitoring and Support Laboratory, U.S. Environmental Protection Agency, EPA-600/4-79-020, or equivalent).

Standards for metals in ground water are based upon the dissolved portion of the sample (after filtration through a 0.45 µm membrane filter, as specified in "Methods for Analysis of Water and Wastes", 1983, Environmental Protection Agency, EPA-600/4-79-020, or equivalent).

For aluminum, both surface and ground water analyses will be based on the dissolved method of analysis.

Freshwater Aquatic Life Standards for total ammonia nitrogen (mg/l NH,-N plus NH,-N) are expressed as a function of pH and temperature. The Acute equation and the Chronic equation are as follows: Э

Acute*° = 0.822 x (0.52/FT/FPH/2)	where FT	F	$= 10^{0.03(20.7\text{CAP})}$	if TCAP $\leq T \leq 30$
			= 10°00°00	if 0 ≤ T < TCAP
	FPH		,	if $8 \le pH \le 9$
			$= (1 + 10^{7.4pH})/1.25$	if 6.5 ≤ pH < 8

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#### DETAILED NOTES OF EXPLANATION CIRCULAR WQB-7

= 20° C TCAP

if Salmonids or other sensitive cold-water species present.

= 25° C

if Salmonids and other sensitive cold-water species absent.

The usual Acute averaging period of one hour is not appropriate if excursions of concentrations to greater than 1.5 times the average occur during the hour; in such cases, a shorter averaging period will

Chronich =  $0.822 \times (0.80/\text{FT/FPH/RATIO})$  where FT and FPH are as above and:

RATTO

if 7.7  $\leq$  PH  $\leq$  9

 $= 20(10^{7.79H}/1 + 10^{7.49H})$ 

if 6.5 ≤ pH < 7.7

= 15° C

TCAP

if Salmonids/other sensitive cold-water species present.

if Salmonids/other sensitive cold-water species absent. = 20° C

Because these formulas are non-linear in pH and temperature, the Standard is the average of separate evaluations of the formulas reflective of the fluctuations of flow, pH, and temperature within the averaging period; it is not appropriate to apply the formula to average pH, temperature and flow.

These formulas yield the allowable concentration of NH3-N. To convert these values to the total ammonia as nitrogen (mg/l NH3-N plus NH4-N) which is the usual way that analytical results are expressed the following formula must be used.

Total ammonia as nitrogen = NH<sub>3</sub>-N x (1+10<sup>PKA+H</sup>)

Where PKA = 0.09018 + 2729.92/T

3

- and T = degrees centigrade + 273.2 A plant nutrient, excessive amounts of which may cause violations of Administrative Rules of Montana (ARM) 16.20.633.(1)(e). €

- Approved methods of sample preservation, and analysis for determining compliance with the standards set forth in WQB-7 are found in:
  1) 40 CFR Part 136 "Guidelines Establishing Test Procedures For the Analysis Of Pollutants", July 1, 1992, and;
  2) The Environmental Protection Agency's (EPA) Methods for the Determination of Metals in Environmental Samples, EPA/600 4-91/010, dated June 1991, or equivalent, as determined by the Department.

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- Radionuclide photon-emitters consisting of either beta or gamma emitters and are classified as carcinogenic. Their associated Standard is based upon a 4 mrem ede/yr exposure. This exposure is based upon daily ingestion of 2 liters of water. The emitters covered under this Standard are: 9
- Gamma photon emitters • Cesium, radioactive • Iodine, radioactive • Strontium -89 and -90, radioactive • Tritium
- Chemicals which are not individually classified as carcinogens but which are contained within a class of chemicals with carcinogenicity as the basis for the Standard derivation for that class of chemicals; an individual carcinogenicity assessment for these chemicals is pending. €
- Freshwater Aquatic Life Standards for these metals are expressed as a function of total hardness (mg/l, CaCO3). The values displayed in the chart correspond to a total hardness of 100 mg/l. The hardness relationship is as follows: 3

	Acute = ex	Acute = exp{ma[ln(hardness)]+ba}	Chronic = exp{mc[ln(hardness)]+bc]	In(hardness)]+bc}
	ma	ра	шс	å
cadmium	1.128	-3.828	0.7852	-3.490
copper	0.9422	-1.464	0.8545	-1.465
chromium (III)	0.8190	3.688	0.8190	1.561
lead	1.273	-1.460	1.273	4.705
nickel	0.8460	3.3612	0.8460	1.1645
silver	1.72	-6.52		******
zinc	0.8473	0.8604	0.8473	0.7614

Note: If the hardness is <25mg/L as CaCO,, the number 25 will be used in the calculation. If the hardness is greater than or equal to 400 mg/L of CaCO,, 400 mg/L will be used in the calculation.

- Conditional limitations based upon Water-Use Classifications. See Administrative Rules of Montana (ARM), Title 16, Chapter 20 Water Quality, Sub-Chapter 6 SURFACE WATER QUALITY STANDARDS. For groundwater see the Administrative Rules of Montana (ARM) 16.20.633(1) et seq and ARM 16.20.1003 et seq. 3
- Freshwater Aquatic Life Standard for pentachlorophenol are expressed as a function of pH. Values displayed in the chart correspond to a pH of 7.8 and are calculated as follows: €

Acute = exp[1.005(pH) - 4.830] Chronic = exp[1.005(pH) - 5.290]

(15) Freshwater Aquatic Life Standard for dissolved oxygen are as follows:

Standards for Waters Classified Standards for Waters classified

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	A-1, B-1, B-2, C-1, and C-2	2-1, and C-2	B-3, C-3, and I	
	Early Life Stages <sup>1,2</sup>	Other Life Stages	Early Life Stages <sup>2</sup>	Other Life Stages
30 Day Mean	N/A³	6.5	N/A³	5.5
7 Day Mean	9.5 (6.5)	NA	6.0	V.
7 Day Mean Minimum	N/A³	5.0	N/A³	4.0
1 Day Minimum	8.0 (5.0)	4.0	5.0	3.0
•				

inter-gravel dissolved oxygen concentrations shown in parentheses. For species that have These are water column concentrations recommended to achieve the required early life stages exposed directly to the water column, the figures in parentheses apply.

Includes all embryonic and larval stages and all juvenile forms to 30-days following hatching.

N/A (Not Applicable).

All minima should be considered as instantaneous concentrations to be achieved at all times.

Aquatic Life Standards apply to surface waters only. <u>9</u>

For surface waters the Standard is the more restrictive of either the Aquatic Life Standard or the Human Health Standard. For groundwaters the standards are based on the dissolved portion (after filtration through a 0.45 micro filter) of the contaminating substance as specified in the EPA publication, EPA 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes." E

The Narrative Standards are located in the Administrative Rules of Montana (ARM) 16.20.633(1) et seq and ARM 16.20.1003 et seq. **18** 

The required 'Reporting Value' is the Department's best determination of a level of analysis that should be achieved in routine sampling. It is based on levels actually achieved at both commercial and government laboratories 6

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in Montana using accepted methods. 'Reporting Value' is the detection level that must be achieved in reporting ambient or compliance monitoring results to the Department. Higher detection levels may be used if it has been demonstrated that the higher detection levels will be less than 10% of the expected level of the sample.

- (20) Applicable to surface waters only.
- (21) Applicable to ground waters only.
- Estimated Detection Levels (EDL's) are used as "Trigger Values" whenever MDL's are unavailable. Trigger Values are used to determine whether-or-not a given increase in the concentration of Toxic parameters is significant or non-significant as per the non-degredation rules. 3
- Levels of individual petrochemicals in the water column should not exceed 0.010 of the lowest continious slow 96-hour LC,9 to several important freshwater species, each having a demonstrated high susceptibility to oils and petrochemicals. 3
- Settleable and suspended solids should not reduce the depth of the compensation point for photosynthetic activity by more than 10 percent from the seasonally established norm for aquatic life. 3
- (25) CASRN is an acronym for the American Chemical Society's Chemical Abstracts Service Registry Number.
- NIOSH RTECS number is a unique number used for accession to the National Institute For Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances. 8
- SAX number in the format AAA123 is a unique number for identification of materials in the Dangerous Properties of Industrial Materials, authors N. Irving Sax and Richard J. Lewis, publisher Van Nostrand Reinhold. ઉ

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